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THE

ALPHABET OF THOUGHT

Presented to OR *Mr Robert*
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OF

METAPHYSICAL SCIENCE.

BY A LADY.

"Prove all things."

"The things which are seen, were not made of things which do
"appear."

HARRISBURG, PA.

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THE UNIVERSITY OF CHICAGO

PHILIP H. RAVEN
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PREFACE.

THE author of the following little work has no apology to offer for having presumed to present it to an enlightened public, except the natural desire which burns in every bosom to communicate thoughts or discoveries which seem to itself new and important. It has been written amidst numerous difficulties and continual interruptions—which it is hoped will excuse many inaccuracies, and nothing but an unconquerable propensity to such speculations, and a conviction that some of its suggestions might promote the interests of science, and accelerate the “march of intellect,” could have sustained the author under the toil with which those “subtle and mysterious things” have been laid hold on and presented in a tangible form to the reader.

The author was led to the undertaking in the following way. Addicted to metaphysical studies, especially that of the mind, the existing systems appeared unsatisfactory, or not sufficiently supported by evidence. Endeavoring to investigate the foundation of those systems, it was discovered that they were not founded in fact, that the principles to which they ultimately appealed, were not established in a logical investigation of the phenomena of nature; but rested on a vagrant kind of light, or of inspiration, denominated *intuition*. On farther inquiry it was observed, that *intuition*, not unfrequently, embraced error for truth, that what to one mind seemed intuitively true, to another seemed intuitively false—that, in a word, the perception of truth is in

every case a deduction of reason, and that what *seemed* to be perceived intuitively, or without reasoning, rested in fact on some other principle adopted unconsciously without investigation. It plainly appeared that the pursuit of science, on the principles considered as established in intuition, more frequently led to absurdity, and to scepticism, than to a knowledge of the truth.

In keeping close to the same method, the investigation of facts, it was discovered that the *criterion* of truth is a simple *phenomenon*, or *form*, in which truth invariably presents itself to the mind, and which is actually, though tacitly recognized in mathematics, in philosophy, and in all the arts and sciences as characteristic of truth, and necessarily connected with it, or as constituting demonstrative evidence.

It was farther discovered, or observed, that to detach the philosophy of mind from general metaphysics, is not the way to cultivate the former with success; but that the metaphysics of mind is intimately connected with the metaphysics of matter and of truth; and that to establish sound principles in the philosophy of mind, it is necessary to ascend to the very first and simplest principles of metaphysics, to discover the generic characteristic of substances, or that which all substances partake in common.—The first principles of metaphysics were discovered to be *facts* which are familiar to every mind, are continually acted on in common life—but are virtually denied in philosophy. What success has crowned the labour will be judged of by those who attend us in the adventurous excursion, through a region heretofore deemed a trackless and barren waste.

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CHAPTER I

OF THE NATURE AND EXTENT OF THE
ART OF ARCHITECTURE

SECTION I

OF THE ORIGIN AND PROGRESS OF
THE ART OF ARCHITECTURE

IN THE FIRST PLACE, IT IS
NECESSARY TO CONSIDER

THE DIFFERENCE BETWEEN
THE ART OF ARCHITECTURE

AND THE ART OF BUILDING

IN THE SECOND PLACE, IT IS
NECESSARY TO CONSIDER

THE DIFFERENCE BETWEEN
THE ART OF ARCHITECTURE

AND THE ART OF CONSTRUCTION

IN THE THIRD PLACE, IT IS
NECESSARY TO CONSIDER

THE DIFFERENCE BETWEEN
THE ART OF ARCHITECTURE

AND THE ART OF DESIGN

IN THE FOURTH PLACE, IT IS
NECESSARY TO CONSIDER

THE DIFFERENCE BETWEEN
THE ART OF ARCHITECTURE

AND THE ART OF PRACTICE

THE
ALPHABET OF THOUGHT,

OR

ELEMENTS OF METAPHYSICAL SCIENCE.

CHAPTER I.

INTRODUCTORY—GENERAL OBSERVATIONS ON THE
NATURE AND OBJECTS OF METAPHYSICAL SCI-
ENCE.

METAPHYSICS is the science which investigates efficient causes, and the necessary relations of things.

Every one who perceives the existence of substances—every one who knows or believes the reality of an invisible world, is a metaphysician, or has performed that metaphysical analysis, through which process alone the existence of those invisible objects is discovered. Metaphysics then, is as old as the creation; every contemplative mind speculates on these things. But it is a field which, however long trodden, has not yet been cultivated to the best advantage; the ground has never been broken up; the seeds of science lie buried beneath rubbish accumulating for ages. The first principles of metaphysics have not been unfolded; and it is yet a dispute as to what are the proper and genuine *objects* of the science; and whether or not any scientific *principles* are attainable respecting invisible objects.

An elementary treatise on metaphysics must analyse this chaos, and reduce it to order. The first business of the metaphysician is to investigate the facts, the *perception of substances*, and the *belief in the existence of efficient causes*; as the first principles of the science should be, the *definitions* of the several species of these invisible objects of knowledge.

We will not stop here to inquire how the human mind originally acquires the idea, or knowledge of an efficient cause; we shall discover this in an investigation of particulars.—It is a fact that mankind, generally, recognise several efficient causes; and it is a fact that we believe certain *axioms*, or recognise certain necessary *relations* of the phenomena of nature to these efficient causes.

All the objects of human knowledge—all things which have a real existence, may be classed under two heads, these are, *Efficient Causes* and *Operations*; or, what are the same, *Substances* and *Phenomena*. The substances which form our world and its inhabitants, are neither more nor less than the efficient causes of the phenomena; and, in fact, they are tacitly recognised as such by all mankind.

Mankind perceive and acknowledge *three* specific efficient causes, or substances; which are perfectly simple, or uncompound; and which are essentially different from each other, having no one *quality*, or no one *operation* in common. These three simple efficient causes are denominated *Power*, *Spirit*, and *Truth*. The following treatise consists of a disquisition intended to demonstrate that these three objects of knowledge are, all of them, in the same *predicament*—that they are *efficient causes*; and that they form the elementary principles of all the *Substances* known to the human mind. But to give some illustration of this subject, in a general way, it may

be observed, that there are known in nature *three*, and only three, simple *phenomena*, or *operations*, corresponding, severally, to the three elementary efficient causes just mentioned. These three simple phenomena are *Motion*, *Perception*, and *Harmony*. These three simple phenomena, or operations, require each, and to each is actually assigned by the common sense of mankind, a specific efficient cause;—and these three simple phenomena constitute all the varied and complex phenomena of nature. This fact will be established hereafter, as far as a principle implying a negative is capable of being proved; but to shew at once that the assumption of it here is not so extravagant as may at first view appear, let it be remarked that the words, or artificial signs called *verbs*, are they which express *operations*, and that all the verbs in human language are comprised in three, to *move*, to *perceive*, and to *harmonize*—and their various compounds. Verbs are the artificial signs of operations; while operations are the natural signs of efficient causes.

The natural sign is that which is properly and strictly signified by the term *idea* or *image*; it is that by which an invisible object makes itself known to the mind. Thus *motion* or *impulse* is the natural sign, or idea of Power; *perception* is the idea of Spirit, and *harmony*, of Truth.

The table below presents these efficient causes and their operations, or these substances and their phenomena, in one view, connected as they are in nature, and in fact.

TABLE.

Efficient causes.	Phenomena.
Power	Motion.
Spirit	Perception.
Truth	Harmony.

If any one alledge that there are other simple elementary phenomena beside the three above mentioned, he has only to point them out, and his exception to our theory will be supported by fact. It would be futile to stop here to answer the objections that will promptly arise out of a spurious metaphysics, against our hypothesis. Each of the simple invisible objects above mentioned, will be the subject of a logical analysis, in which it will be demonstrated that they agree, severally, with the idea, or characteristic of an efficient cause; and with the signification of the word *substance*. In discussing each subject separately, the objections which appear most plausible will be investigated.

The *definitions* of Power, Spirit, Truth, Motion, Perception, and Harmony,—or the *general terms* which designate these objects, together with the first *truths*, or *axioms* relating to them, constitute the *Alphabet of Thought*, or the elementary principles of all our knowledge.

Before we proceed to investigate the several *species*, it is proper and necessary to define the general terms *efficient cause* and *phenomenon*. In the definitions we of course give the same signification to the terms which is most commonly annexed to them, but in the *axioms* and *corollaries* we shall take the liberty to enlarge on those commonly received, so as to exhibit a more extended view of the truths implied in, or arising immediately and necessarily out of the definitions, or out of the predicament of the things defined.

Definition. An efficient cause is that which is able, in itself, to produce an effect, or an *operation*.

Corollary. A *specific* efficient cause is that which is able, in itself, to produce a specific operation.

Corollary. An efficient cause is an *ultimate cause*;

for that cause which depends on another cause for its existence; is dependent also for its operation; it is not able, in itself, to produce an operation.

Axiom. Like causes produce like effects.

Corollary. The same simple efficient cause, produces uniformly the same simple operation, and no other.

Definition. A phenomenon is an *operation* addressed to the senses, or to the mind.

Axiom. Every operation requires an operator, or a cause which is able to produce it, that is, an efficient cause.

Cor. Every phenomenon is the operation of an efficient cause.

Ax. A specific operation requires a specific efficient cause.

Ax. An efficient cause must be present with its operation;—in other words, every phenomenon is the immediate effect of, and takes place within its efficient cause.

CHAPTER II.

OF THE GENERAL CHARACTER OF SUBSTANCES.

IT has been long the practice with writers on General Metaphysics, to set out in their discussions and inquiries about the general character of substance, with tacitly assuming the principle, that substances are *not* the *efficient causes* of the phenomena; that consequently, the phenomena have no *necessary connexion* with the sub-

stances; and that of course they, the phenomena, furnish no logical evidence of the existence, or nature of the substances. But while metaphysicians tell us what substances are *not*, they omit to tell us what they *are*. In so doing they have acted like an unskillful general, who leaves an unsubdued fortress in his rear; from whence the garrison frequently sallies, and renders nugatory the rest of his progress. In fact, the farther metaphysicians proceed on the above mentioned principle, the more they find themselves embarrassed; they have adopted without investigation a principle, which, were it correct, should be the key to all their future discoveries; they have taken their very first step in the dark, contrary to all the rules of philosophizing; they have relinquished that which should be the first object of the metaphysician, to ascertain, what *is* the general character of those invisible, or metaphysical objects, called substances; or what it is which the mind actually perceives, and which we denominate *substance*.

A substance is that which subsists of itself, and is the subject of modes, that is, of qualities. Or more correctly, a substance is an *efficient cause*, or the *agent* in the production of some operation, or phenomenon. There is nothing which subsists of itself, or is self-existent, excepting efficient causes. In fact, the things called *substances*, are nothing else than the efficient causes of the phenomena which attend them; and they are really, though tacitly recognized as such by all mankind. The proof of these propositions is the main design of the following treatise.

It has been common to define substance thus, "A substance is that which subsists of itself, *independently of all created beings*, and is the subject of modes." But, with deference, it is no definition at all to tell us what a

thing does *not* depend on, or whence it is *not* derived; we should be told whence it is derived, if derived at all. If the *existence* of the *elements* of substances depend on a creator,—if substances are *made of nothing*, the *fact* should be established on clear and rational evidence, before it is made the ground work of philosophy. If it cannot be established, then we are free to inquire whether the elementary substances subsist of themselves absolutely, or necessarily, and in their own nature.

But let us not be misunderstood; substances subsist of themselves in their *elementary* state,—Power, Spirit and Truth subsist of themselves,—and these, it will be seen, are the constituent elements of all substance. But the existing *combinations* of substances, all the combinations which ever have existed, or ever will exist, depend on a Creator. There are in fact no other simple substances than such as enter into the constitution of God himself; that is, there is no other *species*, or kind of simple elementary substance, than those which constitute Deity. It is plainly revealed, that Power, Spirit and Truth belong essentially to God, the only question is, are these things *substances*, *essences*? and are they the elements of all substance; or are they only *attributes*, *qualities*? But this is a question of pure metaphysics, it is not decided by revelation.

To create, is to *combine* several substances in one. Before the creation substances were in an uncombined, or chaotic state; “the earth was without form, and void;” it was *void* of any *sensible form*, or quality; yet it “*was*,” or *existed*. But there is no such thing in the created earth, as a substance existing in a perfectly simple state. It is a fact known in chemistry, that a simple substance passing from one compound into another, carries with it a portion of the substance with which it was previously

combined; and it is known that there are substances which never exhibit themselves singly to the senses, such are *nitrogene*, *oxygene* and *hydrogene*. It is, therefore, not in a chemical, but in a metaphysical analysis, that the simple substances disclose themselves. Chemistry possesses no criterion of the simplicity of its subject; that criterion must be a metaphysical principle; as substances are metaphysical objects of perception, even while they are subjects of chemical analysis.

It is a curious fact in the annals of philosophy, that its votaries disclaim a knowledge of what constitutes substance, and assert that its generical characteristic is undiscoverable; at the same time that without hesitation they call things by the name of *substance*, and enumerate a variety of kinds; and would deem it absurd to deny the substantiality of certain things with which they are familiar. On what principle are the *metals* or the *earths* called substances? It may be said these are known to be substances by their gravity and solidity. But gravity and solidity characterize the *species*, not the *genus*; they characterize *matter*, but do not belong to any other species of substance. Mind, or *spirit* is neither solid nor ponderous, yet it is a substance. Why is spirit called a substance? Why is *caloric* called a substance? it is not known to gravitate. There must be some general idea annexed to the things so called; there must be some known character which includes this class of objects, and excludes all others. It would be palpably absurd to call *motion*, or *perception*, or any *operation* whatever by the name of *substance*. What then, is the signification which is in fact annexed to the term *substance*? This question will be answered as we proceed.

There is another remarkable fact to be gathered from the annals of philosophy. It is this, that philosophers

and metaphysicians, one and all, designate the *matter*, and the *mind* of this lower world, by the same generical term which they apply to the Being of the Supreme God. The common terms *substance* and *essence* are applied alike to both. Now if matter is made of nothing, and is *not* the efficient cause of its phenomena; and if mind is in the same predicament, how can they possibly have that *substantiality* which characterises the great first cause? How can they have the same generical characteristic? If the penetrating minds of philosophers do practically feel, or perceive this infinite difference, this entire discrepancy between the Being of God, and the beings he has made, is it conceivable that they would unanimously agree in classing both under the same denomination? Or does not this fact plainly shew, that they could not separate the one from the other, in a philosophical arrangement of categories; or that, according to the general sense of mankind, the attribute of substantiality, or self-existence, is common to the Being of God, and to the substances which constitute the world?

We cannot prove, in a direct manner, the general principle that substances are the efficient causes of their phenomena, otherwise than by an investigation of particulars. This attempt will be prosecuted in the following chapters. But previous to this investigation it will be necessary to inquire into the foundation and authority of *two principles* which have long received the general belief, and which are opposed to the general principle just mentioned. These two principles are, first, *The World is made of Nothing*; and, secondly, that *The Essence, or Substance of Deity is simple, or uncompounded*: or, that *God is a simple efficient cause*.

The connexion of these principles with the subject in hand, will be obvious to the reader. It is evident there

can be no other efficient causes than those which enter into the constitution of God; that is, there can be no other *species*, or kind, of efficient cause, than those which constitute the Supreme Efficient Cause; for an efficient cause cannot arise out of, or be created from, nothing. Hence, if God is a *simple*, or uncompound efficient cause, there is then but one efficient cause, in the philosophical sense of the term, in the universe. And if substances are efficient causes, and nothing else, there is then but one *simple* substance. On the other hand, if the world is made of nothing, and substances are not the efficient causes of the phenomena, then indeed there may, for aught we know, be a variety of substances, or, for aught we know, there may be but one; there would be no ground for any rational conclusion respecting this matter; we could not reasonably infer different substances from different phenomena; and the phenomena of mind, as we are wont to call thought and perception, may, for aught we know, belong to matter; since on this hypothesis, the connexion of substance and phenomenon, or of substance and quality, would be merely arbitrary. If substances are made of nothing—if they are not the *efficient causes* of the phenomena, there is then no logical evidence, that is, no evidence at all, to determine in any case what the substances are, and the dispute about the materiality, or the immateriality of the mind, is idle.

The Supreme Being contains within himself the source or *substance* of all possible good. No one will be so hardy as to deny this, unless he can point out some other source of good. Hence the beings and things which He has created, are either composed of the same substances, or essences which constitute His own Being, or He has created, from nothing, beings and things which are not good. But this is wholly inadmissible; it would be im-

puting to God the origin of evil. If God made things of nothing, he would make them incapable of evil; but the self-existent, self-sustained *elements* of substance, retain their primitive powers and tendencies in all their varied combinations. If evil originates in good, it is not because it is inherent in any good thing; every simple *substance* is good in itself; every elementary efficient cause is good; Power is good, and Spirit is good, and Truth is good; but every *finite* combination of these things, every *finite mind*, not possessing *all truth*, is liable to err, to reject truth. Hence the origin of evil,—hence decomposition, or corruption,—which begins in mind, in the reasoning mind. Evil is a negative thing, it has no direct efficient cause.

We will not stop to shew, in this place, by abstract reasoning, the absurdity of supposing that a simple efficient cause is capable of producing a variety of immediate effects, or that a simple principle of operation may produce, or exhibit, a variety of operations. Nor shall we adduce here any direct evidence in proof of the position, that Power, Spirit and Truth have all the same generic character, that they are all efficient causes. All that is intended in this place, is to investigate the testimony from scripture which is supposed to support the principles, that God is a simple Essence, and that the world is made of nothing.

The principle that God is a simple Essence, is founded, or is supposed to have a foundation, in a single passage of sacred writ, "Hear, O Israel, the Lord our God 'is one Lord.'"—What is the plain and obvious meaning of this passage? Laying aside all pre-conceived opinion, and listening to the dictates of common sense,—if she may presume to have a voice in the matter,—do the words *one Lord*, signify *one simple Essence*? Common

sense says, No.—King David was *one king*; yet every chemist knows, and every metaphysician knows, that king David was composed of several simple *essences*. What, then, was the import of the words, which all Israel was called on to hear? Was it a metaphysical theory respecting the *Essence* of Deity, or respecting the constitution of His Being? The word *essence* does not occur throughout the whole of the sacred volume; and though its *synonyma*, *substance*, does occur in many places, it is not used in a metaphysical sense.

The meaning which the passage presents to a plain understanding, is this, He who is the God of Jacob, He who sits between the Cherubim, who brought Israel out of the land of Egypt, is *one Lord*,—*one King*;—*one Ruler* of the universe;—He rules in heaven above, and He rules all the nations of the earth. It was evidently intended to contradict the heathenish belief, that the several different efficient causes, which manifest their existence by their phenomena, were each a distinct deity. The heathens worshipped Power under the names of *Jupiter*, *Hercules*, &c. Spirit under that of *Juno*, and perhaps some others. Perhaps, *Minerva*, represented Truth. These separate objects are discovered by the unassisted faculties of the human mind; they exhibit themselves continually to common sense, or reason, through the medium of their phenomena. But it is from revelation alone we acquire the information, that Power, Spirit and Truth are united in one supreme Lord, who is the same yesterday, to-day, and forever.

It cannot be believed that any one who will turn his attention to this subject, will maintain, that the passage under consideration furnishes any ground for the metaphysical theory that is built upon it. It is hard, indeed, to imagine how any one could be led to conceive, that

there is any connexion between the passage "Hear, O Israel," &c. and the principle, *God is a simple Essence*. The text declares, "The Lord our God is *one Lord*;" and upon this authority it is asserted, that *God is one simple Essence*. Surely the one is an expression quite different from the other; *one Lord*, and *one simple Essence*, are not terms of the same import. King David was one king of all Israel and Judah; yet king David's person was a compound of several essences, or substances. The body and spirit are different essences, yet they form together but *one man*. And surely it is a perversion of the scriptural text to make it a prop to a mere metaphysical theory; for it is not in fact a principle in theology;—the *unity of God*, and the *simple city of His Essence*, are two distinct principles; the one, of theology, the other purports to be a fundamental principle of metaphysics. If the divine historian had given us the words *one simple essence*, instead of *one Lord*; if the passage had stood thus, 'The Lord our God is *one simple essence*, or *one simple uncompounded Being*, or *one simple efficient cause*; if the prophet, descending from his high vocation to give a lesson in metaphysics, had said this, or any words of the same import; then we must have submitted to take on the credit of such high authority, a principle which we could not reconcile to the dictates of reason. But the passage, if taken in its plain and obvious meaning, offers no such difficulty; there is nothing in it to tempt reason to revolt; nothing but what is perfectly reconcilable to the principles of genuine philosophy.—And surely it is rendering no service to the cause of religion, to set her at war with reason and philosophy.

There is no mode of rational interpretation, by which the passage of scripture under consideration can be made

to prove, that God is a simple Essence. But there is abundance of evidence to be drawn both from scripture, and from reason, that the supreme Being is compounded, or consists of *three* distinct essences, or of three simple efficient causes, which are essentially different from each other. The solution of this problem will turn, almost entirely, on the signification annexed to the word *essence*; which will be the subject of inquiry hereafter.

We next proceed to analyse the scriptural foundation of the principle, that Matter is made of nothing. Indeed, this principle has been extended to Mind, or Spirit, also, and it is confidently affirmed that All things are made of nothing.—It is plain that if the mind, or spirit, is made of nothing, it cannot be an efficient cause, or able of itself to produce an effect; if it cannot sustain its own *existence*, it cannot sustain the *effects* of its existence; it cannot be the real efficient cause of its own phenomena, or the real agent in thought, feeling, or volition. We would not then be accountable beings, nor proper subjects of rewards and punishments; a consequence which every sober mind must deprecate.—We shall be told that the Creator made of nothing the human spirit, and then gave it the power to perceive. But the *power to perceive* is the very *substance* or *essence* of spirit; spirit itself is the power to perceive,—or it is the efficient cause of perception. But more of this again. At present the discussion will be limited to an examination of the passages of sacred writ which are supposed to uphold the principle, that the world is made of nothing.

It is written, “God made all things *by the word* of *His Power*.” And again, it is written, “By faith we understand that the worlds were *framed* by the word of God; so that the things which are seen were not

“made of things which do appear.” This testimony is infallible as far as it goes; what sacred writ affirms, it were folly and impiety to controvert, or to evade. It is granted then, that the worlds were *framed by the word of God*, or *made by the word of His Power*. But if this means that the worlds are *made of nothing*, it would at least require a prophet to tell us so, ere we should be entitled to give such interpretation to these passages. That God made the world *by the word of His Power*, and that God made the world *of nothing*, are propositions of quite different import, if we take the words in their usual acceptation; and it seems impossible, by any logical alchymy, to produce a transmutation of the one proposition into the other, or to make both represent the same ideas. There is not a word in either phrase that is found in the other, excepting the preposition *of*.

Shall we be accused of assuming too far, if we venture to express the simple language of common sense, as to the signification of the above passages of scripture? It is not with theology that we would presume to enter the lists, but with a spurious metaphysics, which has surreptitiously connected itself with theology. That the world is made of nothing, purports to be a *fact*; but this fact is *not* attested in sacred writ, nor is it established on any rational ground. God made all things by the *word*—that is, by the *expression*, or *operation of His Power*. The words which in grammar are called *verbs*, literally *words*, represent *operations*. The words of a language are the artificial signs of things; operations are the natural signs of efficient causes, or substances. Thus *motion* or *impulse* is the natural sign of power; or it is the *word* of power. It will be proved in another place that the Word, or the Son of God, is the operation of the three-fold Essence, or Efficient Cause,—that is, of

Power, Spirit and Truth combined in One; or rather, that He, the Son, is the product, or register of this operation. God made the world by the *Word*, or the *Operation* of His power;—He regenerates the world by the *Word*, or expression, or manifestation of His truth. “For this cause came I into the world, that I might bear witness to the truth.”

Impulse is the word, or the operation of power, but power operating on nothing, impels nothing, produces nothing. But power operating on, or within itself, produces, or forms itself into a concrete, or solid substance. This will be shewn at length.

St. Paul says, “The things which are seen were not ‘made of things which do appear.’” That they were then made of *things which do not appear* to the senses, seems plainly to be implied. And if St. Paul really had known that things were made of nothing, there could not have been a more convenient opening for him to have made the declaration in plain terms. But he did not make it, and this alone is indirect evidence, that the things which are seen are made of *things* unseen.

That the world is made of nothing, is a metaphysical *dogma*, unsupported either by reason, or revelation. It is thus that a false philosophy puts carnal weapons into the hands of theology, who persuades herself that she is wielding the *sword of the word*, while in reality she is fighting under the banners of a very different warfare.

CHAPTER III.

OF MATERIAL SUBSTANCE.

MATTER is that which is solid and ponderous, or matter is that which gravitates and repels. This is the usual way of defining matter. But "A definition strictly and logically regular, points out the *genus* of the thing defined, and the *specific difference* by which that thing is distinguished from every other species belonging to that genus."* According to this, the above definition of matter is not *logically regular*; it points out the specific difference, but not the *genus*. Gravitation and repulsion distinguish matter from every other *species* of substance, but do not form the character of the *genus*, or of substance generally. Matter, indeed, is called by a generical name; it is called a *substance*; and it has this name in common with several other objects of knowledge,—or there are several species of substance actually recognized by mankind generally; and this would seem to imply, or rather it does most plainly imply, a tacit recognition of the generical characteristic of substance,—or of that which constitutes any thing a substance. But we are admonished by the grave philosopher, that the generic characteristic is unknown, and that the knowledge of it is beyond the reach of the human intellect. We are told that *facts* are the *only* proper subjects of philosophical investigation;—and he who launches into the invisible world, with a view to explore its depths, or who at-

*Aristotle.

tempts to speculate on the metaphysical character of substances, is viewed nearly in the same light with the alchymist in search of the philosopher's stone.

If it were really the fact, that the generic characteristic, or that which constitutes substance, were unknown, or unperceived by the human mind, then substance would be a word without any signification—at least without any metaphysical application. But if the generic character of substances were really unknown, on what principle, it might be asked, are the several *species* referred to the same *genus*? What is the ground of this classification? Why is matter, and why is mind called *substance*? How does it come to pass, that mankind generally recognize certain things as substances? There must be some principle which has the common consent of mankind, at the bottom of this classification.

The only rational solution of the problem is to be found in the *fact*, that the metaphysical, or generical characteristic of substance is perceived by mankind generally, by the learned and by the unlearned. The business of philosophy is, not to deny this palpable fact, but to analyse it, to inquire what is indeed the object of the mind's eye in the perception of substance. A logical analysis of the fact, that the mind perceives certain things to be substances, will detect the metaphysical character of substance, because it will discover what it is that the mind actually perceives as constituting substance. It will unfold and demonstrate the principle, that substances are the efficient causes of their respective phenomena; and it will shew that they are actually recognized as such. And it is a fact, that in all our theorizing respecting *matter*, and in all the common transactions of life, a specific efficient cause is tacitly recognized as constituting material substance.

Matter is the efficient cause of gravitation and repulsion; in other words, material substance is mechanical power. It is proposed to establish this definition of matter in the disquisition which follows.

It is common to apply the word *power* to efficiency in general, or to any species of efficiency. There is the *power of truth*, and the *power to think*, as well as the *power to impel*, or to *move*. But when the word is used absolutely, it signifies a certain *species* or kind of efficient cause, that is, mechanical power, or the power to impel.

In opposition to our *hypothesis* we shall be told, that though matter gravitates and repels, it is not the *real* efficient cause of these phenomena. We shall be told that matter is made of nothing, and that, consequently, it possesses no real power, or efficiency, and is incapable, in itself, of producing any operation; that though it is the *apparent*, it is not the *real* efficient cause of gravitation and repulsion. These consequences have been admitted on all hands, as flowing from the principle that matter is made of nothing; and that matter is not the efficient cause of the phenomena, is the ground on which it has been contended that matter has no existence. It is alleged by those who contend for the existence of matter, that gravitation is produced by a *physical*, or *secondary* cause, an *impression*, or impulse, produced *ab extra*. It is believed that this operation, *ab extra*, is necessary to the production of gravitation, because matter, as it is said, does not, in itself, possess the power to gravitate. It is believed, if we rightly understand this scheme, that the uniformity of the gravitation of matter, is maintained by the immediate superintendence and energy of the Supreme First Cause, or Creator; and that all the pheno-

mena of matter are produced in the same way, or that God is the immediate agent in their production.

This scheme implies that the Deity is the only efficient cause in the universe, and that every operation in nature is the effect of a divine volition, and the operation of divine power. To maintain consistency, this doctrine has been carried into the philosophy of mind also, and the Supreme Being is represented as the only efficient agent in every action, or operation, whether intellectual, moral, or physical. Some have supposed that events are produced simply by divine volition, without any exertion of power. But it is so absurd to suppose that a simple volition can produce the effects that are proper only to power, that it would be an insult to common sense to go about to refute it. That Divine Providence controuls and directs all events, is undeniable; it is a fact that is established in revelation and in reason; but to suppose that He is the sole efficient cause, or agent, in all operations, moral and physical, while He at the same time controuls all events, is to suppose Him to controul His own operations. It would, in fact, imply the supposition, that the Deity controuls, or that He only suspends His own operations, when He restrains the actions of the wicked. These are the legitimate consequences of the principle that the world is made of nothing; the Deity would be the real agent in all the operations of the human mind, as well as in the gravitation of matter.

Some philosophers, perceiving the absurdity of this theory of gravitation, and perceiving also that it derogates from the dignity of the divine character,* have invented another scheme to account for the gravitation of

*It is a heathen maxim, but a wise one, that, *We should never make a god appear, but on an occasion worthy of a god.*

matter, which shall be noticed after a short examination of the one already before us.

Let us inquire then, Is it a real fact, that the gravitation of matter is produced, not by matter itself, but by divine power operating upon matter? Has it been ascertained by *experiment* and *observation*, that bodies gravitate, not by their own inherent tendency and power, but in consequence of an impulse produced upon them from without? By no means. It has never been observed in a single instance that gravitation is produced by an extraneous impulse. But it is said, this extraneous impulse, or some extraneous cause, is necessary to the production of the phenomenon, for that matter possesses no power in itself, nor any necessary tendency to gravitate. This is a begging of the question; or, at best, it is a deduction from the principle that matter is made of nothing; a principle intirely without foundation.

The other theory, above alluded to, invented to account for the gravitation of matter consistently with the principle, that matter is made of nothing, is this, that matter, having no efficiency of its own, is endowed with the power to gravitate, or impressed with the tendency, at its creation. But this is a mere gratuitous assumption. And it might be asked, What was the thing that was impressed with the tendency to gravitate? It was not material substance until it had that tendency; for matter is that which gravitates; What was it then before it was matter, or before it had gravity? It was *nothing* that was impressed with the tendency, or which received the power to gravitate. It is nothing still if it do not gravitate really. And the difficulty returns upon us, that matter gravitates, either *necessarily* or *voluntarily*. That gravitation is a voluntary operation, as it respects matter itself, cannot be admitted—will not be believed by any

one; that it is the effect of divine volition, and the operation of divine power, is equally inadmissible;—this will appear more fully by and by;—and, if gravitation is a necessary operation of matter, if it is the necessary consequence of its nature, how is that nature, or necessity, known to be superinduced, and not involved in the existence of the substance?

If matter gravitates necessarily, then it is, apparently, and there is no good ground to suppose that it is not really the efficient cause of gravitation. But if the former theory be the true one, that matter has no real agency in producing the phenomenon; then matter gravitates neither necessarily nor voluntarily; it is not really matter which gravitates. But then, matter has no existence that we know; we had imagined that we perceived matter in its phenomena, or through the medium of its operations, but we certainly perceive nothing but that which gravitates, really, we perceive mechanical power, and nothing else.

But matter manifests its existence so plainly through the medium of its solidity, or its phenomenon *repulsion*, that it would be absurd to deny its existence, even though we give up gravitation as furnishing evidence of that existence. Is repulsion, then, the real operation of matter? Is material substance the real *efficient cause* of repulsion? If so, then, that *material substance exists*, is a logical deduction from the existence of the phenomenon. But if matter is the real agent in the one case, why not in the other? Repulsion is an energy, or operation, of the same species, or kind with gravitation, and requires the same species of efficient cause; and if matter is the real efficient cause of this phenomenon, why not of gravitation also? But those who tell us that matter is made of nothing, are bound to

contend that matter is not the real efficient cause of either phenomenon; or that repulsion is not necessarily connected with the substance, any more than gravitation. They will tell us that the phenomena furnish no logical evidence whatever, of the existence of matter, because they have no necessary connexion with it. How then do you know that matter exists? Take away gravitation and repulsion. or take away the necessary connexion of these phenomena with matter, and the substance vanishes like the "baseless fabric of a vision, and "leaves not a wreck behind." We perceive matter in these phenomena; gravitation and repulsion constitute the *sensible form*, or the *idea* of matter. We have no other idea of matter than this; all other ideas, or sensible forms may be abstracted from matter, but gravitation and repulsion cannot.

The only avenues to the mind, are the senses, and the reasoning faculty; in other words, every object of human knowledge is, either a phenomenon, that is, an *operation* which presents itself immediately to the senses or to the mind, or it is an object invisible to the senses, and perceived only by reason, or by way of inference from the phenomena. We infer the invisible efficient cause from the visible operation. But substances made of nothing are not perceived in either of these ways. This is granted on all hands. A substance does not present itself immediately to the senses, like an operation; neither are substances made of nothing, perceived by reason; the operations of nature furnish no logical evidence of a substance which does not really operate. Nor is it alledged that the human mind possesses any faculty of perception, other than reason, sense, and consciousness.

But we are told, that though we have no logical evidence of the existence of matter, and though it is not perceived immediately, as motion, perception and other operations are, yet that it is *perceived*; we know that it exists, for it is a fact that it is perceived. We perceive gravitation and repulsion by the senses, but beside this, we perceive the substance which gravitates; or we perceive *something* which gravitates and repels; that is, we perceive that there must be an operator where there is an operation; we perceive that there "must be some-thing which gravitates and repels."* Very good. But this *perception* that there *must be* something which gravitates and repels, is a deduction of reason; it is inferring the agent from the operation. Then substances are not perceived immediately, as has been supposed, but their existence is inferred from the phenomena.

It is a fact too, that we infer a specific operator, from a specific operation; from gravitation and repulsion we infer the existence of that specific thing which we call material substance.—If the substance were perceived immediately, or without an exercise of reason, there could then be no ground for dispute about whether the substance which *gravitates*, be the same with that which *perceives*. If these substances were perceived immediately, as operations are, the question would be settled at once by immediate perception. We never dispute about whether blue and yellow are the same, or different colours; or whether motion, and perception are the same, or different phenomena. In the perception of a phenomenon, or operation, there can be no ground for dispute about what the object is; it is just what it appears to be. The case would be just the same with

*Dr. Reid.

respect to substances, if they were perceived immediately; they would then *appear* to be just what they really are; their appearance would be *ocular demonstration*.

It is an imperious dictate of reason, that wherever there is an operation, there is an operator, and that a specific operation requires a specific operator, or a specific efficient cause,—a cause which is able, and has a direct tendency to produce that specific operation. It is in fact a specific operator that is uniformly inferred from gravitation and repulsion, and that is denominated material substance; for it is undeniable that mankind generally perceive this substance, and that they look no deeper, nor higher than the substance itself, for the efficient *basis* of the phenomena. None but philosophers of a certain school ever speculate on the efficiency, or inefficiency of the substance; and they do not pretend to have ascertained the alledged fact of its inefficiency, in a philosophical way; they have not even investigated the metaphysical principle on which their doctrine is founded, the principle that the world is made of nothing.

In opposition to these arguments it will be urged, that the substance actually *perceived* is not the efficient cause of the phenomena, but that it is something else, a thing which is made of nothing, an inert thing, which cannot of itself produce the phenomena.—It is thus that it is attempted to reconcile the metaphysical *dogma*, that the world is made of nothing, with the known *fact* that substances are perceived by the human mind. It is asserted that we *perceive substances which are made of nothing*, and which are *not* the efficient causes of the phenomena; and, in conformity with this, it is asserted, that the perception of substance is not a deduction of reason. These alledged facts are believed to be sufficient to prop,

or even to support the whole of the mysterious fabric that is reared upon them; among other things, that the metaphysical object called material substance is perceived, and yet its metaphysical character is not perceived; that it is perceived neither by sense, nor by reason, nor by any known faculty of the mind, yet it is perceived.

Facts are stubborn things; and it is a certain fact that we perceive material substance; we are conscious that we perceive it. And if we are equally certain that we *perceive substances which are made of nothing*, if we were *conscious* of this, or if we were conscious that the perception of substance is *not* a deduction of reason, then indeed there would be ground to contend for the nothingness of matter. But is it a real fact that we perceive substances that are made of nothing, and which are not the efficient causes of the phenomena? Are we conscious of perceiving, in material substance, a thing which is made of nothing, and which has no necessary connexion with the phenomena? Are we conscious of *perceiving* that the phenomena are connected arbitrarily with the substance; and that, if it had pleased the Creator, we might have perceived a material substance which did not gravitate and repel; or that we might have had the phenomena just the same, but unconnected with any substance, or being, except the Deity? Certainly we are not conscious of perceiving all this; on the contrary, common sense revolts from the doctrine thus carried out to its genuine results. When the phenomena of matter are addressed to the senses, we perceive that there *must* be a substance, we perceive that the operation is necessarily connected with a specific operator, or with something which has a tendency to produce that specific operation; and we never dream of the hand of Deity being immediately concerned.

It is granted on all hands, that we perceive in matter something which gravitates and repels. But if that which produces these phenomena, is not, really, material substance, but the hand of Deity, then it is the hand of Deity that is perceived—or it is the *power* of Deity that is perceived; and if we do not choose to call the power of God by the name of material substance, then there is no material substance. There is nothing in the universe that does, or that can gravitate and repel, excepting that which is *able* to gravitate and repel, that is, the efficient cause of gravitation and repulsion. Nothing but *power* can gravitate and repel; in fact, whatever does gravitate and repel, or produce any modification of impulse, is denominated *power*. The word *power* signifies, that which moves, or impels. These phenomena are, on all hands, referred to power as their *ultimate cause*; but one party, or sect, contends, that there is an intermediate something, called matter; something which comes between the cause and the effect—between the operation and the real operator. But this is a bare assumption; for this intermediate thing is not, in fact, perceived nor known to exist. The thing perceived through the medium of the phenomena, is the efficient cause of the phenomena; it is that which gravitates and repels really; we are not conscious of perceiving any thing beside. It is a maxim of the Newtonian philosophy, to “Admit no more causes than “are true [real] and are sufficient to account for the phenomena.” If matter is not the real cause of the phenomena, its existence is not necessary to account for the phenomena.

Before we quit this subject, it is perhaps necessary to inquire a little further into this theory of the *perception of matter*. After the adoption of the principle that matter is made of nothing, it was perceived to be a necessa-

ry consequence, that matter is not the real efficient cause of its phenomena; and that, of course, the phenomena could have no necessary connexion with the substance. Hence it became necessary further to admit, that there existed no logical evidence of the existence of material substance; and some pursued this train of reasoning until it led to the conclusion that matter has no existence. Those who still contended for the existence of matter, in spite of philosophy, admitted all these results, (the last excepted)—they acknowledged they could not establish the fact of the existence of matter, on rational grounds. In truth, if the fundamental principle of this theory were true—if matter were made of nothing, it would be impossible to prove its existence—it would be impossible to know or perceive its existence.

But the modern attempt to establish this theory on *fact*, is perhaps the most ingenious, and is certainly the most sophistical that has been recorded. Ever since the invention of the *new organ* of investigation by Sir Francis Bacon, the *induction of facts* has been considered the only legitimate method of philosophizing. Considering, very justly, that the study of metaphysics should be prosecuted in the same method with that of physical science, by induction of facts, it has occurred to our modern metaphysicians that the *perception of matter* should be considered an *ultimate fact*, or a *law of the mind*, just as the *gravitation of matter* is an ultimate fact, or a *law of matter*. This appears to have been intended as an application of the Baconian method in the science of Logic, to determine the predicament of a particular *fact*, or to induct that fact into a class; that is, to class the *perception of matter* with *ultimate facts*. But, unfortunately for the attempt, it seems to have been forgotten, that according to the Baconian method, investigation, or

analysis, should precede induction. If the authors of this new theory of perception, had analysed the fact—the perception of matter—they would not have classed it with ultimate facts. But they seem to have considered a simple statement of the fact, and of its character, to be all that is called for by the method that they profess to follow.

Professor Stewart, of Edinburg, who is the oracle in metaphysics, will speak for the whole sect on the theory of the perception of matter. On this subject the Professor has the following observations.—“Singular as it may appear, Dr. Reid was the first person who had courage to lay completely aside all the common hypothetical language concerning perception, and to exhibit the difficulty in all its magnitude, by a plain statement of the fact. To what then, it may be asked, does this statement amount?—Merely to this, that the mind is so formed, that certain impressions, produced on our organs of sense by external objects, are followed by correspondent sensations; and that these sensations (which have no more resemblance to the qualities of matter than the words of a language have to the things they denote) are followed by a perception of the existence and qualities of the bodies by which the impressions are made.” The author goes on to observe, that, “for aught we know, the connection between the perception and the sensation, as well as that between the sensation and the impression, may be arbitrary; and that at any rate, the consideration of these sensations, which are attributes of mind, can throw no light on the manner in which we acquire our knowledge of the existence and nature of bodies. And though, by the constitution of our nature, certain sensations are rendered the constant antecedents of our perceptions, yet it is just as difficult

"to explain how our perceptions are obtained by their means, as it would be upon the supposition, that we were all at once inspired with them, without any concomitant sensations whatever."* The Professor elsewhere tells us, that the perception of material substance, or "the belief in the existence of the material world," is a "*fundamental law of human belief.*"†

Professor Stewart and Dr. Reid are intitled to much credit for having had the candour to "exhibit the difficulty in all its magnitude," instead of pursuing the beaten track, and not inquiring *how* our sensations and ideas are connected with a substance which is made of nothing; or in what manner the mind acquires a knowledge of such substance. But it is strange that such minds should still have been so shackled by the false principle, that matter is made of nothing and has no necessary connexion with the phenomena; it is strange that the very nature and magnitude of the difficulty did not lead them to analyse the subject, and to shake off their chains by a detection of the fallacy. Men of transcendent talents, professing to reject, as spurious, every thing which did not come supported by established fact, yet voluntarily, and without an investigation of its evidence, binding themselves down to a principle, which, like the stone of Sisyphus, is continually dragging them down again from the summit which seemed to beckon their ascent.

The professor proposes to himself to "lay aside all the common hypotheticalal language concerning perception, and to exhibit a plain statement of the fact." This fact is expanded into a pretty long paragraph; though

*Elements of the Philosophy of the Human Mind, pages 86, 87, first vol. Amer. ed.

†Vol. 2, p. 55, New York ed.

all that is really fact, may be expressed in a short sentence. "Certain impressions produced on our organs of sense, are followed by correspondent sensations; and these sensations are followed by a perception of the existence and qualities of the bodies by which the impressions are made." These few words, and they are sufficiently prolix—express the whole of the *fact*; the remainder of the paragraph is hypothetical. And we are compelled to observe, that the *fact* is stated incorrectly; there is a radical error contained in it, which it is necessary to have corrected, before it be received as a principle in philosophy; "the sensation is" not uniformly or necessarily "followed by a perception of the existence and qualities of the bodies by which the impressions are made." The mind is *not* "so formed," that the *impression* on the external organ is necessarily followed by a *perception* of the bodies which make the impression. The author's "statement of fact," as he terms it, assumes the very point in dispute, that the perception of substance is not a deduction of reason; but that "by the constitution of our nature," the impression on the external organ is followed by a perception of the bodies by which the impressions are made.—If it be a truth, that the *impression* and *sensation* are uniformly followed by a *perception* of the existence and qualities of the bodies which make the impression, if in persons incapable of reasoning, that perception uniformly follows the impression and sensation, then that perception is not a deduction of reason, it is not an inference from the impression. But let us analyse the "fact," and see whether it is as the author has conceived and has stated it.

It is a pretty plain fact, that "impressions produced on the external organs of sense, are followed by correspondent sensations."—And yet this fact is not so plain

and simple, as it may appear at first view, or as the author seems to have conceived it to be. He states, not merely, that *the impression is followed by a sensation*—but that “the impression is followed by a *correspondent* “sensation.” He says, moreover, that “these sensations “have no more resemblance to the qualities of matter, “than the words of a language have to the things they “denote.” The *correspondence* then, of the sensation to the impression, is a mere arbitrary correspondence, like that of the words of a language to the things they denote. But if this be so, the author should have revealed the manner in which we acquire a knowledge of the *impression*, or of the *qualities* of body; for if the *sensation* has no necessary connexion with the *impression*, if the sensation is not the effect, of which the impression is the exciting cause; then it will be just as difficult to explain how we come by a knowledge of the impression, as how we acquire a knowledge of the body which makes the impression. If the sensation is only the *arbitrary sign* of the impression on the external organ, as words are, of the things they denote, how do we learn the signification of the sign? how do we know that there is an impression? the sensation is the only sign, or the only notice we have of the impression; and if it is an arbitrary sign, and has no necessary connexion with the impression, how do we learn the existence of the impression? Arbitrary signs have no natural or necessary relation to the things they denote; the words of a language convey no intelligence, until we have learned their signification, by comparing them with the things signified. But how shall we compare the *sensation* within the mind, (which is perceived by consciousness,) with the impression without, which is not perceived by consciousness, and of which we know nothing,

until we learn its existence through the medium of the sensation. We know nothing of the impression, unless the sensation is the evidence of its existence.

But what is the fact? is the connexion of the sensation with the impression, an "arbitrary" connexion? Bodies, or material substances produce certain impressions on the external organs of sense. These impressions are the same that are called the phenomena, or the sensible qualities of bodies, though the Professor does not seem to have identified in his own mind, the "qualities of matter," and the "impressions produced on the external organs of sense." Matter has no qualities but those which are addressed to the senses. For example, solidity, or repulsion is a quality of matter; and repulsion produced on the organ of sense, is the "*impression produced on the organ of sense.*" The "qualities of matter" then, are the same with the "impressions produced on the organs of sense by external objects." But what is the *sensation* which follows the *impression*? It is simply the *perception of the impression*; or rather, it is the perception of the change, or configuration, produced within the organ by the impression. When a hard body is held in the hand, the repulsion of that body produces a compression within the organ of feeling; the organ, or nerve, is conscious, or sensible of this compression; or it perceives the compression; this is the sense, or sensation of hardness, or of solidity; it is the perception of the impression, or quality of matter. It is thus that the sensation corresponds to the impression; it is the perception of the impression; this is not an arbitrary correspondence; it is the correspondence of cause and effect, for the impression is the exciting cause of the sensation.

It certainly does appear to the common sense of mankind, that there is a natural and necessary connexion between the impression on the organ of sense and the sensation which follows; and that the sensation is the cognizance, or the perception, of the impression. The way in which we obtain a knowledge of a substance and its qualities, is to apply it to the senses. But the Professor says, "the consideration of these sensations, which are attributes of mind, can throw no light on the manner in which we acquire our knowledge of the existence and nature of bodies." And it is true that sensation, abstracted from its object, and considered only as it relates to the mind, will afford no light on this subject; but there is no such thing, in fact, as abstract sensation; every sensation has an object, or exciting cause, as well as a subject, or an efficient cause. The mind is the efficient cause and subject of the sensation; but the impression on the organ is the exciting cause and object of the sensation;—and our sensations differ from one another, only according to the differences of the exciting causes. Thus it is in considering our sensations in relation to their exciting causes, that we derive the light which explains the perception of substances; for when we have discovered the *impression* through the medium of the sensation, we are then naturally led by reason to perceive, that there *must be* something which makes the impression—that there must be a substance, or an efficient cause of the impression. Our sensations correspond to the secondary qualities of matter, in the same way that they do to the primary, to solidity and gravity. This will be the subject of some further consideration by and by. But to return.

It is a fact, that "impressions produced on our organs of sense, are followed by corresponding sensations; and

“these sensations are followed,” sometimes, “by a perception of the existence and qualities of the bodies by which the impressions are made.” But, we submit the question, Is it the fact, that the *impressions* are uniformly followed by a perception of the existence and qualities of the bodies by which the impressions are made? Do infants perceive *substances* as soon as the impressions are produced on their organs of sense? Do infants perceive at all the *existence and qualities* of the bodies by which the impressions are made? There is reason to believe that infants have no conceptions of any thing beyond their own ideas and sensations; they certainly have no conceptions whatever of the impressions produced on their organs, until they have acquired that knowledge by frequent experiment and observation.

If impressions produced on the organs of sense, were uniformly followed, by a perception of the substances which make the impression, then the *perception of matter* would appear to be altogether unaccountable; for it is evident that the impression has no tendency to produce the *perception of matter*, unless it be addressed, as evidence, to a reasoning mind; and it is equally evident, that the mind has no *innate* tendency to *perceive matter*. If the mind were originally “so formed,” as to perceive substance whenever an impression is produced on the organ of sense, then it should perceive matter as soon as it exists, for impressions from external objects are continually presenting themselves. As soon as matter exists, it gravitates;—and as soon as mind exists, it *perceives*. As soon as there is life, impressions produced on the external organs of sense will be felt, or perceived. As soon as a sensitive organ exists, it feels, or perceives the changes, or vibrations produced within itself by the impressions of external objects. It is true, then, that

impressions produced on the organs of sense, are followed by *perception*, or *feeling*; but not always by a perception of the substance or body, which makes the impression. Perception then, simple perception is a *law of mind*; whenever mind is excited, or acted on, it perceives; that *mind perceives*, is an *ultimate fact* which cannot be accounted for; that is, we cannot give a reason for it, we cannot tell *why* mind perceives, any more than we can tell *why* matter gravitates. We can only say, it is the nature of the one to gravitate, and of the other, to perceive. But we cannot with equal propriety say, that it is the nature of mind to perceive material substance, or any particular object. The mind has an innate tendency to perceive, but it has no *innate ideas*, or particular perceptions. Perception is its own; but ideas, or impressions, come to it from without.

The *gravitation of matter* is an *ultimate fact*; it is a fact which cannot be accounted for, that is, we cannot give a reason for it; it is a universal law of nature, that matter gravitates. And it has been conceived, that by representing the *perception of matter* as an *ultimate fact*, or a law of the mind, that the whole difficulty respecting the perception of matter, would be obviated; that if it is a *law of the mind* to perceive substances which are made of nothing, no farther account of the matter could reasonably be demanded. But the perception of matter is not an *ultimate fact*, as we have seen—it is not a universal law of mind, the *perception of matter*, is by no means a parallel to the gravitation of matter. The two facts are quite dissimilar, in a logical as well as in a philosophical point of view. That *matter gravitates*, and that *mind perceives*, are facts precisely analogous, in a logical sense, they are both *ultimate facts*; the one is a universal law of matter, the other, of

mind. But that *mind perceives material substance*, is quite a different species of fact. Perception relates to mind, in the same way that gravitation relates to matter; these are necessary relations; but the *perception of matter* has no necessary relation either to mind, or to matter; yet it relates to both; to matter, as its exciting cause and object; and to mind as the efficient cause of perception. That *mind perceives*, is a general fact, and it is a fundamental principle of metaphysical science; but that *mind perceives matter*, is a particular instance of that general fact. The efficient cause of perception is every where the same, nothing but mind, or spirit, perceives; hence the relation of perception, to mind, is a necessary relation; but perception is excited by an infinite variety of objects, or exciting causes, which are foreign to the mind, but incidentally come in contact with it; hence the relation of perception to its object is an incidental relation.

Before we have done with this subject, we shall essay to trace the process in which the mind discovers the existence of material substance. In the mean time we will endeavor farther to illustrate the position, that Power is the substance of matter, and the efficient cause of gravitation and repulsion.

It may be alledged, that though it were admitted that Power is the substance of matter, still this would not remove the difficulty respecting the gravitation of matter; it would not account for the phenomenon, without a recurrence to *mind* as the ultimate cause. It will be asked, Why does matter gravitate? Supposing the substance of matter to be *Power*, why should power uniformly act toward a center? Why should the most distant bodies approach, or be deflected toward each other? Power possesses no faculty of choice; matter and power, are

alike incapable of choosing in what direction to act, or to what end. How then can it be accounted for, that matter uniformly gravitates, or acts toward a center of gravity, unless this direction is given it by mind, unless this phenomenon is produced by the power and influence of the supreme first cause, the divine mind?

This appears to be the grand difficulty. Yet it is not thought necessary to inquire, Why does matter *repel*? or why is it *solid*? It seems to be universally admitted, that repulsion is inherent in the substance. Yet repulsion is an operation of power, as well as gravitation; it is an energy of the same kind, and requires the same efficient cause; and if matter is not the efficient cause of repulsion, this phenomenon is as hard to be accounted for, as gravitation. It is conceived, that as matter gravitates uniformly, that uniformity must be the effect of *volition somewhere*, and be produced by mind. Some philosophers have attributed that volition to matter itself, and the material world was believed to have a soul. But the more enlightened moderns perceive that matter does not act voluntarily; yet they have fallen into the opposite error, in supposing that matter is in its nature a clog to our volitions, and to our intellectual enjoyments. All, however, who deny that matter has a soul, and acts voluntarily, attribute the phenomena to the divine will and power.

But gravitation is not the effect of volition any where. Gravitation is not a voluntary, but necessary operation of matter; contraction is not a voluntary, but a necessary operation of power. Contraction is the *modus operandi* of power; it is the primary operation, or, that by which every modification of motion, or impulse, is originated. Sir Isaac Newton tells us, that "Every particle of matter is continually deflected toward every other

“particle of matter.” Matter *uniformly* gravitates, or power uniformly contracts, simply because this operation is not voluntary, but necessary; because power has no choice, nor a capacity to originate motion in any other way. *Mind* can no more than matter, choose before hand, whether it shall, or shall not, perceive—nor what it shall perceive. The appropriate operation of an efficient cause, cannot be varied even by that cause; much less is it to be controuled, or produced by any foreign, or extraneous cause. Mind or spirit, is in the same predicament with matter, in this respect; it is its nature to produce a specific operation; it perceives necessarily, and has no choice or direction in the matter. For this reason, the simple spiritual substance * cannot choose at any time, whether its operation shall be perception, or some other phenomenon; its operation is *perception* necessarily; it has no power to originate motion. The supreme mind cannot choose—let it be spoken with reverence—whether He shall, or shall not know, or perceive; He perceives necessarily; Spirit is a constituent element of His Being, or Essence; and Spirit is the efficient cause of perception. The Deity can no more cease to perceive, than he can cease to exist.

Gravitation or contraction, or the approach of the parts toward each other, is the *mode*, or manner in which power operates; it is the mean through which power produces all its more remote effects, or by which it originates every degree and modification of motion or impulse. This fact we have exhibited before our eyes continually; and though it may never have been stated in terms, it is continually acted on in mechanical operations. If an arm is bent, or drawn toward the body, it is by means of *contracting* the muscles of the fore-side

* That which is called *mind*, is a compound of power and spirit.

of the arm; if it is stretched out, it is by contracting the antagonist muscles. If a great force is to be exerted, it is to be by concentrating the force, or contracting the muscles, perhaps of the whole body. In all machinery, the principle of motion is the same, and is recognized in the construction; the force produced is by means of a contraction, somewhere; it is either by gravitation, as the falling of water, or the preponderance of a weight; or it is produced by animal power, the operation of which always originates in contraction.

Contraction then, is the mode, or manner in which power operates; it follows, that this operation is not the effect of volition, not even of divine volition; it is the necessary operation of power. But contraction, or gravitation, is the mode or manner in which matter operates; it is the universal law of matter, as well as of power. It follows, that material substance and power, are one and the same.

But it is the general belief, that Mind, or Spirit, is the ultimate cause of gravitation, and of every modification of force, or impulse. Notwithstanding this, it will be readily granted, that power is *necessary* to the production of impulse; that when mind impels, or originates motion, it is by means of power; and that, without power, mind is incapable of producing impulse. Power then is necessary to the production of impulse; and it appears too, that it is *able* to produce impulse, and the only thing that is able to produce this phenomenon, for mind without power, is not able to impel. But that which is necessary to a specific operation, and is able to produce that operation, is the *efficient cause* of that operation.

Still it will be contended, that power is an *attribute of Mind*, and not an independent efficient cause, that Mind

or Spirit is the ultimate efficient cause of all things. The principle, that *Power is an attribute*, shall be inquired into again; at present we will consider whether or not the mind, or spiritual substance, is the efficient cause of gravitation and repulsion. If mind, or the spiritual substance, be the efficient cause of gravitation and repulsion, it must produce these phenomena either immediately, or mediately. If mind is the immediate cause of gravitation and repulsion, then it is mind which gravitates and repels, or mind is solid and ponderous. But this is absurd; it is confounding things which are essentially different; for gravity and solidity, or gravitation and repulsion, are the characteristics of matter, and distinguish matter from mind. But if mind produce gravitation and repulsion mediately, or by a previous operation produced upon matter from without, that previous operation must be some modification of motion or impulse; it must be an operation of the same kind with that to be produced by it; for neither perception nor volition have any tendency to produce, either primarily, or secondarily, the appropriate operation of power; to suppose that they could do so, would be utterly to confound all our ideas of cause and effect. But that *previous impulse* must be, either the immediate operation of mind—which involves the same absurdity we just exploded—or it must be the effect of another previous impulse—and that of another, and so on *ad infinitum*. But this is equally absurd with the former alternative. So it appears, that on whatever principle Spirit is supposed to be the efficient cause of impulse, it implies an absurdity.

Since the spiritual substance is not the efficient cause of gravitation, it follows, that Power is the sole cause of this phenomenon; there is no other cause concerned

in its production. If power is the efficient cause of gravitation, then material substance is the efficient cause of gravitation; or material substance is the power to contract, or to gravitate. The efficiency of material substance is tacitly admitted in all our reasonings respecting bodies, and in the uses we apply them to. Do not the walls of our houses *repel* the storm? Does not the floor sustain our weight? Perhaps it will be said, that matter is an *instrument* employed by presiding Deity for this and other purposes, and that it is nothing more. Be it so. But must not a thing possess some power, or efficiency, to fit it for being an instrument? Must not that which is employed to *repel*, possess the power to repel? If it do not, it can have no *instrumentality* in producing the effect. And if matter has no real instrumentality, no real efficiency, it is absurd to suppose it employed as an instrument. And in this case, why should it be supposed to exist? The phenomena would be just the same without it. The repulsion of the storm, the reflection of light; the suspension of our bodies some thousand of miles above the center of gravity, (if bodies we certainly have;) these phenomena are the real operations of power, and if material substance is not that power, if it do not really produce and sustain these phenomena, what office does it perform? What part does it sustain?

There is nothing really *substantial* excepting efficient causes. That matter is the real efficient cause of its phenomena—that is, of gravitation and repulsion; its essential phenomena is implied in the language, both of the learned and the unlearned. We may confidently appeal to the common sense of mankind, are the phenomena, gravitation and repulsion, exhibited to the senses by matter, or are they exhibited by mind? By matter

certainly, it will be replied, and not by mind. Is matter *necessary* to their exhibition, or are they sometimes exhibited by something else, independently of matter? Undoubtedly matter is necessary to their exhibition; there is nothing but matter that gravitates and repels; and whatever gravitates and repels, is matter. Can matter exist without exhibiting these phenomena, or without solidity and gravity? No, it cannot; it gravitates continually and necessarily; that which does not gravitate, is not matter. Then matter is necessary to the production of these phenomena, and it is adequate to their production, for it cannot exist without producing them; in other words, matter is the efficient cause of gravitation and repulsion.

But there are still objections to this doctrine, which it is necessary to investigate. It is confidently asserted, that *Power is an attribute of mind*; and it is considered a self-evident truth, that *Power cannot be without a subject*. These assertions have an imposing aspect; the first is in the form of a *definition*; and the last, of an *axiom*, or an *intuitive truth*. That Power cannot be without a subject, is one of those principles, which, before the time of Mr. Locke, were called *innate ideas*; and which at the present time are believed to be perceived *intuitively*, or which Professor Stewart terms “fundamental laws of belief.” But truths are not perceived in this way, as will be shewn hereafter. To be convinced that the above *axiom*, Power cannot be without a subject, is not perceived *intuitively*, but is a deduction of reason, we need only observe its relation to the *definition*, viz. Power is an attribute of mind. The process in which the mind arrives at the *axiom*, is as follows. If power is an attribute, it follows of necessity, that power cannot be without a subject. Here the

major proposition, that is, an attribute cannot be without a subject, is taken for granted without being expressly stated, as is frequently the case in metaphysical reasoning. The above reasoning is plausible, indeed the induction is quite correct; but it proceeds on a false principle, consequently the conclusion is false, although it is fairly deduced from the premises. The process would be stated more methodically thus, *An attribute cannot be without a subject; but Power is an attribute, therefore, Power cannot be without a subject.* The conclusion so plainly and necessarily follows from the premises, that we are apt, in reconsidering or applying the principle which forms the conclusion, to overlook both the *major* and the *minor* proposition, and the whole process by which we arrive at that principle, and to imagine that we perceive it intuitively, or without any exercise of reason. Yet it must be obvious to any one who considers the subject, that the truth of the principle, Power cannot be without a subject, depends entirely on the correctness of the premises which have been stated, and more particularly on the *minor* proposition, that Power is an attribute. It is *assumed*, that Power is an attribute; but this is a false definition of power; consequently, the conclusion, that Power cannot be without a subject, is false.

If the term *attribute* have the same signification with the word *quality*, then it cannot be a true definition of power to say, it is an attribute. When a thing is to be defined, or when we are about to *point out the genus* to which any thing belongs, it is necessary, not only that the character of that thing be clearly ascertained; but also, that the characteristic of the *genus* to which that thing is to be referred, be well understood; otherwise the definition may be false, and may lead to false con-

clusions, even when we have a just conception of the thing to be defined. That *Power* has been erroneously defined, was owing, not so much to the want of a correct knowledge of the nature of power, as to the vagueness of the generical term *attribute*. When it is said that Power is an attribute, a precise meaning should be annexed to the word attribute; we should not only have inquired—What is Power? but we should have ascertained with precision—What is an attribute? The word attribute is generally used as synonymous with the word *quality*, but it is sometimes applied in a different sense. It frequently signifies that which belongs to, or is possessed by, some being or thing; as when we say, Man possesses mind, or intelligence. This is attributing *mind* to man, or it represents mind as an *attribute* of man. In this sense of the word, an *attribute* may be either a substance or a quality, for mind is a substance, and an attribute of man; and power may be an attribute and at the same time a substance, a thing which subsists of itself, or *without a subject*. But in the more strict and proper sense of the word, an attribute is some action, or operation, or some *species* of action, or operation, as that *gravitation* is an attribute of matter; thought, or *perception* is an attribute of mind. This agrees with the signification of the word *quality*; gravitation, or gravity, is a *quality* of matter; but it does not agree with the character of Power. Power is not an action, nor an operation of any kind; Power is the subject of an attribute; *contraction* is the attribute, or the *quality* of power. Yet the principle, that *Power is an attribute*—in the latter sense of the word *attribute*, or that power is a *quality*, is the foundation of the axiom, *Power cannot be without a subject*. Definitions do neither good nor harm, except when they are made principles of science.

It may be proper, and it may tend to illustrate the foregoing paragraph, to inquire a little further into the general character of qualities. A correct definition, either expressed or understood, of the term quality, would seem to be a necessary preliminary to the determination, respecting any particular object, whether or not it be a quality. Quality is a term which has acquired a considerable latitude; to discover what is its radical signification, we should proceed by an investigation of particulars. *Gravity* and *solidity* will be allowed on all hands to be qualities, in the strictest sense of the word. What is gravity? and what is solidity? Gravity has been defined, a *tendency* to gravitate; or a *power* to gravitate. But this latter has been exploded; modern philosophers affirm, that matter possesses no *power* to gravitate. We have, in fact, no knowledge of a power to gravitate, different from the *substance*, or that which actually gravitates. Power is not an attribute. Material substance is itself the *power to gravitate*, or the *power to contract*; the efficient cause of gravitation, is the only power to gravitate. There is no such thing as a quiescent tendency, or power, to gravitate; the actual *operation*, and the *efficient cause* of the operation, which cannot cease to operate, are the only real objects of knowledge; gravitation, and that which gravitates, are all that we know of, or belonging to, material substance. Whatever has a real existence belongs to the one or the other of these two *genera*; it is either an *efficient cause*, or the *operation* of an efficient cause. Perhaps it is not strictly proper to say, that an operation *exists*; but operations are certainly *real*, and they are *necessary* too.—The idea which is really annexed to the term *gravity*, is that of *gravitation*, or of the actual force, or deflection of one body toward another. Gravity and solidity are

the same with gravitation and repulsion; the one and the other are called *sensible qualities*; or qualities perceived by the senses; but the organs of sense perceive only operations; they do not perceive latent tendencies or powers. This is the true philosophical import of the word *quality*; a quality is a phenomenon, or an operation addressed to the senses, or to the mind.

If this be the true import of the word *quality*, then *power* is not a quality, it is not a phenomenon. Power is not an attribute of mind. That mind exerts an active power, is an undeniable fact; but it does not follow, that Power is a *quality* of the mind, any more than it would follow from the operation of Spirit, that Spirit is a quality of the mind. To explain this matter more fully, the subject will be resumed; but we have not done with the qualities of matter. Of the *secondary qualities* of matter we shall speak again; but there are several accidents which are considered to be essential and distinguishing qualities of matter, which have no title to be so denominated. *Divisibility* is certainly not a phenomenon, or an operation, it is therefore not a *quality* of matter, nor of any thing else. Neither is *extension* a phenomenon, or an operation, or a *quality* of matter. It has been generally set down as an undeniable fact, that extension and divisibility belong exclusively to matter, and that they distinguish matter from mind, or from spirit. But this is an assumption without proof; no one pretends to have discovered by *experiment* and *observation*, or by any mode of investigation, that spirit or mind, is unextended; but it is one of those principles, which get possession of the mind by means of that native love of mystery which attaches to our natures. Matter and Spirit are distinguished from each other, only by their *phenomena*; Spirit is an extended being, as will be seen

when the subject comes to be investigated. *Extention* is a word of nearly the same import with *space*. *Space* is length, breadth, and depth abstracted from body, or substance; *extention* is length, breadth, and depth attributed to body or substance. *Extention*, signifies the space which a substance occupies; *space*, is *extention* unoccupied.

Vis inertiae has also been considered a characteristic of matter. But the terms contain a solecism. The *power of inertness*, is the *power to be powerless*. That which is obviously alluded to in this expression, is the *power of gravitation*, or the power to resist being moved in any direction, but that in which matter uniformly tends, toward a center of gravity. Resistance is an operation of power; it is a phenomenon of the same kind with impulse, and requires the same species of efficient cause. This resistance is called *inertness*, because it is not a voluntary action, nor to be overcome by simple volition; it is only by organization, or by combining spirit with matter, that the latter becomes obedient to the will. Matter is morally and intellectually, but not physically, inert. The *power of inertness* is the power of gravitation and repulsion; and this *power* is not a quality, but a substance.

This substance, or power to gravitate, is not perceived by the senses; but it is perceived by reason; it is discovered in a metaphysical analysis of the nature of the phenomena. This *analysis* is a spontaneous operation of the mind, and takes place even in children, or as soon as the child begins to observe the result of its own experiments, or the effects produced within its organs of sense by contact with external objects. In pretty early childhood we discover, that certain events, or operations, are uniformly succeeded by certain other events. We

find by experiment, that by a single stroke we can send an apple or a ball rolling across the carpet. In this way we acquire the conception of a cause, and of the relation of cause and effect. The child, indeed, will not comprehend your meaning, when you talk to him of a *cause*; for he has not learnt the meaning of the term; but he will tell you that he can *make* the apple roll, which plainly expresses his idea of a cause. But they are only physical, or secondary causes that he first becomes acquainted with. In making farther experiments and observations, he discovers another kind of cause. When he holds a lump of clay or a ball of metal in his hand, he perceives that it forcibly presses downward, or toward the earth; and as often as he repeats the experiment, he observes the same phenomenon. He observes also a powerful repulsion in the ball, which prevents his hand from closing. He knows that he was himself the cause of the *rolling* of the ball, or that the rolling was produced by the *impulse* which he had originated; but he discovers no external, or secondary cause of the latter phenomena, of the gravitation and repulsion of the ball. But he has learned from his observations on secondary causes, that every effect has a corresponding cause; the gravitation and repulsion of the ball, must have a cause suited to their production, and that cause must be within the thing whence the phenomena proceed. That thing must of itself produce the phenomena, or it must be the *efficient cause* of the phenomena. And that efficient cause must have a *substantial* or permanent existence, for it never ceases to maintain the phenomena or sensible appearance. This is the metaphysical process in which, while children, we discover the existence of material substance, or the efficient cause of gravitation and repulsion. Every mind discovers for itself the

relation of cause and effect, and the existence of efficient causes; no words, or *artificial signs* can inspire the mind with a knowledge of this relation, or with the idea of an invisible efficient cause; we perceive efficient causes only through their *natural signs*, their operations.

But when the child becomes a youth, he learns from books, or from his preceptor, that his reason plays him false in this matter; that she is not a proper guide in philosophy; that there are certain principles, no matter whence derived, to which reason must succumb; that the world is made of nothing, and that matter is not the efficient cause of the phenomena: and that the substance which he perceives has no necessary connexion with the phenomena.—This appears mere jargon to his unsophisticated mind; for he is unconscious of perceiving any thing in, or belonging to matter, excepting the phenomena, and the efficient cause of the phenomena. He cannot conceive how the substance can appear to be any thing beside what it really is, for he knows that it does not *appear* at all to the senses, it discloses itself only to reason, through the evidence of the phenomena. It is in vain that he asks for the rationale of the theory presented to him, the ultimate appeal is, not to reason, but to the principle—The world is made of nothing; and he is exhorted to believe, on pain of being pronounced a dunce and infidel. And after an inward struggle between reason and prescription, he adopts the *dogma*, and enters a labyrinth where the farther he advances, the more he is entangled.

We come now to consider the secondary qualities of matter: It is an obvious fact, that there is an infinite variety of phenomena attending matter, which yet are not essential to it, or necessarily connected with it; and

are therefore called *secondary qualities*. The phenomena which meet the senses, are not, all of them, the real operations of matter; that is, simple material substance, or *power*, is not the efficient cause of all the phenomena with which it is connected. Some bodies exhibit phenomena, which all bodies do not, and which, therefore, do not necessarily belong to body. Matter is not the real efficient cause of all the phenomena which attend it; and from this it has been too hastily concluded, that matter is not the real efficient cause of any of its phenomena; or that gravitation and repulsion are not its *real qualities*, nor necessarily connected with it, any more than the secondary qualities. If there are certain phenomena exhibited by some bodies which are not exhibited by all, we may rationally conclude that these phenomena are not essential to body; or that simple material substance does not produce, by its own efficiency, those phenomena which it does not exhibit uniformly; but we are not entitled to infer, that matter does not produce any operation by its own power. There are phenomena attending bodies, which mechanical power does not, and which it cannot produce; but the legitimate inference is, that there are other *causes* present; that there are other, or *immaterial substances* in combination with matter; substances which do not contract and repel, but which, by producing other modes of operation on the organs of sense, excite other sensations than those excited by contraction and repulsion. And if we shall actually find other substances—substances, the phenomena of which are essentially different from gravitation and repulsion; if we should find such substances in chemical combination with matter—if we should find spiritual substance concerned in producing some of the phenomena which apparently belong to matter—we ought not to

recoil from the truth, although it may shock our prejudices. Some one has well said, that "We should pursue truth whithersoever she lead, heedless of consequences."

But we shall be told, that it is absurd to suppose matter and spirit to be chemically combined. Most people are ready to pronounce *absurd* any doctrine or principle, which contradicts opinions which have long held possession of the mind, whether these opinions are founded in reason and in fact, or are not. To be *absurd*, is to be incompatible with some known truth, or established general fact. If any established truth or fact, can be pointed out, with which the allegation that material and immaterial substances are chemically combined, is incompatible, then that allegation is absurd and inadmissible; but if no such truth, or fact can be adduced, you are not entitled to pronounce the allegation absurd.

Perhaps this challenge will be met, if not by an established fact, at least by a theory which has long usurped the authority of truth. It will be asserted that the spirit or mind is an unextended thing, occupying a point somewhere in the brain; that it is therefore incapable of coming in contact, and consequently incapable of combining chemically with matter, which is extended. But on what does this theory rest? It is not a known fact, established in experiment and observation, that spirit is unextended; nor is it a fair deduction from any known fact. We will not suppose that any enlightened mind will pertinaciously adhere to this theory. There is a substance well known to chemists, which does not gravitate; it exhibits no phenomenon that belongs essentially and properly to matter; therefore it is not a material, but an immaterial substance. Yet it enters into chemical combination with all substances; it is *caloric*, or

heat; its *modus operandi* is *expansion*, the reverse of contraction.—It will be demonstrated in the next chapter, that the substance of heat or fire, is neither more nor less than the elementary *spiritual substance*. There is another immaterial substance, the phenomena of which we shall find blended with those of matter.

But it will be thought inconceivable, that the operations of immaterial substances should affect the senses; that they should be seen, or felt, or tasted. But if the operations of immaterial substances are not the exciting causes of some of our sensations, then all the variety of ideas and sensations which we experience, are produced simply by the operations upon our organs, of contraction and repulsion. But this is much harder to conceive, than that the operations of immaterial substances should be seen with the eyes, or tasted with the palate. And we would ask, *Why* may it not be true, that immaterial substances affect the senses? What is matter, that it should have more efficiency than spirit in affecting the organs of sense? Or are the organs of sense adapted only to contraction and repulsion? There are several facts to be ascertained, before it can be asserted on good ground, that the senses are incapable of discerning the operations of immaterial substances; or that these substances have, and can have, no share in producing the phenomena of nature. There can be but one simple material substance, or one simple *basis* of contraction and repulsion; and it would be absurd in the extreme to suppose, that this one simple principle can be the basis of all the endless variety of phenomena which meet the senses; or that it can produce at the same time *contraction, expansion, bitter, sweet, red, blue and yellow*.

There are a variety of minute operations produced on the organs of sight and of taste, which have not been

ascertained to consist of contraction and repulsion; we know that the senses take cognizance of other modes of operation exhibited on a broad scale, such as the *ascension* of vapour, the *expansion* of bodies by heat, the *harmony* of sound; and when these operations are minute, and are produced in contact with the organs of sense, may they not produce that variety of sensation which we experience? It is unphilosophical, and contrary to common sense, to suppose that all our different sensations have only one exciting cause; which must be the case, if the senses perceive only the phenomena of matter.

There is a two-fold classification of phenomena, which arises out of the nature of things, but which renders this subject much more complex and entangled apparently, than it is really. The classification we allude to, is not a scientific, or artificial one; it is to be collected from the common language of mankind; it is founded in common sense, and common observation, and in the obvious *differences* and *analogies*, of the phenomena of nature, and of the organs of sense.

And first, the phenomena are classed according to the *different organs* affected. There are *colors*, or objects of *sight*; *sounds*, or objects of *hearing*; *tastes* and *odours*, or objects of *taste* and *smell*; and all the different degrees and modes of repulsion, as *hardness*, *roughness*, &c. the objects of *feeling*. But each organ of sense perceives *different phenomena*, or different modes of operation. And it is a fact worthy of observation, that several of the organs of sense, perhaps all of them, excepting that of feeling, distinguish *three* simple modes of operation, or experience three distinct kinds of sensation. Of the objects belonging to the organ of vision, we have the three primary colours, *red*, *blue* and *yel-*

low ;* corresponding, numerically, and essentially too, as will appear—to the simple elementary phenomena, *motion*, *perception* and *harmony*—and to the simple efficient causes, Power, Spirit and Truth. The organ of hearing distinguishes three distinct operations; first, simple *sound*; secondly, *harmony* of sound, a phenomenon distinct from simple sound; and thirdly, the *pathos* of sound, distinct from either of the former. Every sound that differs at all from simple sound, partakes of one, or both of the two latter modifications of sound.—The organ of taste also distinguishes three simple phenomena, the *sweet*, the *pungent*, and the *astringent*, or *acid*.

But again, the common sense, and common language of mankind, recognize an *analogy* between the *sensations* of the different organs, or rather between the *phenomena* addressed to the different organs; which phenomena are the objects and exciting causes of our sensations. Thus we have *sweet sounds*, and *sweet colours*, as well as *sweet tastes* and *sweet odours*. Then we have lively and dull colours, lively and dull sounds, lively and dull, or insipid tastes, &c. This analogy, or similarity, which is so plainly recognized in the phenomena, is obviously inferred from the analogy, or similarity of the sensations excited in the different organs by the phenomena. It is obviously taken for granted, that the sensation excited in one organ by any mode of operation, is analogous to the sensation excited in any of the other organs, by the same mode of operation. The same simple *mode of operation*, that is *harmony*, is *beauty* to the eye, *melody* to the ear, and *sweetness* to

* The remaining four of the colours sometimes numbered with the elementary, are evidently compounds.

the taste and smell. A harmonious vibration produced in the organ of sight, or in that of taste, similar, or corresponding to the vibrations produced in the organ of hearing by musical sounds, will of course produce in those organs sensations, analogous to that excited by music; for a *sensation* is nothing else than a *perception* of the vibration or change, produced within the organ of sense, by the operation of the external object upon that organ.

The eye has the advantage of perceiving *harmony* in a variety of different situations and relations, from which circumstantial differences the same phenomenon takes different names. There is harmony or proportion of form or figure, otherwise called *beauty*; harmony of movements, called *grace*; and one of the primary colours will of course consist of a harmonious vibration produced upon, and within the organ of vision.

"So the glad impulse of congenial powers,
 "Or of sweet sound, or fair proportion'd form,
 "The grace of motion, or the bloom of light,
 "Thrills through imagination's tender frame,
 "From nerve to nerve."

Which of the primary colours it is that consists of a harmonious vibration, whether it is the red, the blue, or the yellow, it would be hazardous, perhaps, to decide; but there is reason to conjecture that it is the red. This conjecture is founded, partly on fact, and partly on the analogy of our sensations. It will probably be granted, that the sensation excited in the organ of sight by the colour of *yellow*, is not analogous to that excited in the organ of hearing by harmony of sound. Our appeal in this case, is to the consciousness, and the discriminating taste of the reader. But there is external evidence in support of the conjecture, that *blue* is not the colour of

harmony. It is a known fact, that blue is the most refrangible of the elementary colours; but refraction is a particular case of gravitation, it is the approach of the parts; and gravitation or *contraction* is a phenomenon distinct from harmony, and excites a sensation peculiar to itself, which will be noticed just now. That the colours are all refrangible in some degree, is evidence that no one of them is quite pure, or unmixed, excepting the blue, or that they all contain a portion of the gravitating substance.

Again, the same simple *mode of operation*, that is, *contraction*, is *acidity*, or *astringency* to the taste; simple *sound* to the ear, and to the eye the colour *blue*. When the material substance in its pure elementary state, enters the organ of sight, as light in general enters and passes through any other chrystaline body, it produces its own mode of operation, a *contraction* in the nerve. This contraction is, in the first place, the operation of the substance which enters the organ; this *operation* is the colour blue; when it has entered the organ, it excites a like operation, a *contraction* in the organ itself, or the nerve; this is called the *idea* of the colour blue. The *idea*, is the colour itself, or it is *contraction* produced within the organ. Further, the feeling or *perception* of the idea, or the perception of the contraction within the organ, is that which is called the *sensation* of the colour blue. The organ does not perceive what is the *mode* of operation by which it is affected, but it perceives that a peculiar idea or change, is produced within it; it perceives the differences of the colours, or of the ideas produced within it, but it does not perceive in what these differences consist.

There is a third simple mode of operation which, with those before mentioned, complete the circle of the phe-

nomena, or of the objects of our sensations. If contraction constitutes the colour of blue and harmony, the red, the only remaining simple mode of operation, that is, *expansion*, will form the colour yellow. It will be shewn in the next chapter, that expansion is the *modus operandi* of spiritual substance; or that it is the manner in which spirit operates upon, and influences matter. It is probably this mode of operation or expansion, that excites the idea and sensation of *warmth* or *pungency* in the organ of taste, and the same which produces or constitutes, the *pathos* of sound. Pathetic, or penetrating sounds, issue from a relaxation of the muscles producing sound, or producing the human voice, and operate by sympathy upon the hearer. This relaxation in the voice, arises from internal distress, or is imitated where there is no real distress, either by the human voice, or by a musical instrument.

Thus expansion, the *modus operandi* of Spirit, is pathos to the ear, pungency to the taste, and to the eye the colour *yellow*; while harmony, the *modus operandi* of Truth, is music to the ear, sweetness to the taste, and beauty, or the colour *red* to the eye; and contraction, the *modus operandi* of Power, is astringency to the taste, simple sound to the ear, and sublimity, or the colour *blue* to the eye. The phenomena of Power constitute the sublime; those of Truth, the beautiful; and those of Spirit, the pathetic.

This is an outline of a theory which cannot be fully developed, except in a detailed investigation of the nature of the human mind. It is merely intended as an illustration of the position, that there is a natural and necessary relation between our sensations and perceptions, and the antecedent *impressions* produced on our organs of sense by external objects; and that the qualities of

bodies, or the phenomena, which are the immediate objects of our sensations, are logical evidences of the existence, and of the various natures of the substances with which they are connected.

The most formidable obstacle in the way of conceiving and establishing the true definition of matter, or of power, viz. Power is the substance and efficient cause of the phenomena of matter, is the prejudice that lingers in the mind respecting the nature of Mind. It is an undeniable fact, that Mind exerts an active power, that it originates motion, or gives the first impulse to muscular action. Hence it is inferred, that power is an attribute or quality of mind. Yet it is not from this simple fact—Mind originates motion, taken by itself, that the inference is deduced; for a much plainer and more natural conclusion would be, that Power is combined with spirit in constituting the *substance* of the mind. But it is tacitly assumed, that *Mind is a simple substance*; and it is on this principle, taken in conjunction with the fact just mentioned, that it is so boldly asserted, that Power is an *attribute* of mind. If mind were a *simple substance*, it would seem that either the *power to impel*, or the *power to perceive*, must be a quality, or that both might be qualities; for if they are both substances, and both belong to mind, then mind is a compound. But admitting mind to be a simple *essence*, and considering that the phenomena of spirit are they which distinguish mind from matter, it follows that the simple spirit is that essence, or constitutes the substance of the mind; and that power is an attribute or quality of spirit.

That mind originates motion, is a known fact. *Motion* then is an attribute of mind, or it is an operation of mind. But *power* certainly is not an operation. Power

is not the operation of a cause, but the efficient cause of an operation. Motion is the operation of power, not of spirit. Mind must possess power, that is, mechanical power, or the power to impel, otherwise it could not originate motion; the spirit or power to perceive, is not the power to impel. The energy of the mind is in proportion to its mechanical power, and not to its intellectual, as distinguished from its mechanical power; it is in proportion to the tension of the nerve, not to the intensity of feeling, nor to the acuteness of perception. Strength of mind does not consist in sensitiveness; it consists even less in the clearness and quickness of perception, than in the power to *repel* thoughts that are painful, or troublesome, and to confine the attention to a subject which requires labor. The labor of the mind is a mechanical operation, as really as the labor of the body; the first consists of a continued effort to produce those trains of ideas, or successive configurations in the brain, which are the *signs*, or evidences of the things which the mind is investigating. The only logical inference that can be deduced from the fact, that Mind exerts an active power, is, that Power is a constituent element of the *substance* of the mind.

We have the same kind of evidence for the existence of *power*, in the mind, that we have for the existence of spirit in the mind; each exhibits its peculiar phenomenon; Spirit perceives, and Power impels. From the phenomenon, we infer the existence of the substance; and from the species, or kind of phenomenon, we infer the species, or kind of substance; that is, from *perception*, we infer the existence of *spirit*; and from *motion*, *power*. Power and spirit, or matter and spirit, are in the same predicament as to their generic characters; they are both substances; or they are both

invisible efficient causes, of visible, or perceived operations.

Mind contains a principle of action, or of impulse, as well as a principle of perception; but it is just as rational to suppose, that the principle of action, mechanical power, is the agent, or efficient cause, of *perception*, as that the principle of perception, or the power to perceive, is the agent, or efficient cause, of *impulsion*. It is just as reasonable to suppose that the material substance, or that power, perceives, as that the spiritual substance impels. Whenever motion, or impulse, is exhibited to the senses, the thing which impels is, without hesitation, called body, or matter; but when the operation is hidden from the senses, and we are left to infer it from the more remote effects, that is, where the impulse perceived by the senses has been communicated, or produced by a previous impulse—for instance, where the action of the muscles is produced by an impulse originating in the mind, in this case, the primary cause, or thing which moves, is called *power*. When the senses perceive the primary, or immediate operation of power, as in gravitation and repulsion, we pronounce the operator to be matter; but when the senses perceive only the secondary effect, we pronounce the originating cause to be power. If we could see with our eyes, or feel with our hands the operation of mind in originating muscular motion, we should have no hesitation in determining that mind is in part material. But we can only infer the operation of the mind in this transaction from what follows, from the action of the muscles; and this is in fact the only evidence we have, that there is an action, or impelling operation, in the mind as distinguished from the rest of the system; for we are not *conscious* of an exertion of power

any where except in the muscles. And if from the action of the muscles we infer that an impulse is given by the mind, it is in plain terms applying the laws of matter and motion, to explain the phenomena of the mind and the muscular system. It is an axiom of the Newtonian philosophy, that the *momentum* communicated, is in direct proportion to the *momentum* of that by, or from, which it is communicated; or, that "The velocity, multiplied into the quantity of matter, of the body impelled; is in proportion to the velocity multiplied into the quantity of matter of the body which impels."

It is common to contrast the mind, with solid body, the *ethereal spirit*, with the *clod of the valley*; and doubtless there is an essential difference between matter and spirit; and there is a contrast between the clod under our feet, and the air which surrounds us. Yet the air contains material substance, and so does the mind, which is not ærial; and matter is not necessarily a clod; it exists in the atmosphere in a *gaseous* state; for the lightest gas that gravitates,—and they all gravitate—is in part material, or contains the gravitating principle. That which the apostle Paul calls a *spiritual body*, is probably an ærial substance, composed of power and spirit, or matter and spirit. It must be in part material, or it would not be *body*, and it differs from the *natural body*, probably by having a greater proportion of the spiritual principle, and in being far less dense.

Material substance, in its primitive state, is not a clod. When the earth was *without form*, that is, "in the beginning," when creation was about to commence; it is probable that the bodies which now exist in a sensible form, were, either in an ærial state, like our atmosphere, where several elementary substances enter into

the formation of a *gas*, or perhaps it was without any chemical attraction, when it would form a more complete *chaos*; the elements mingling, or existing together in space, without at all affecting, or being affected, by each other. The lightest *gas* has some degree of gravity, and gravity is the distinguishing characteristic of matter; the lightest *gas* then is, in part, material, and in some part the same, essentially, with the heaviest bodies in the internal parts of the earth. Every elastic fluid, or every *gas*, contains necessarily a contracting, and an expanding principle; the opposing tendencies of these two principles constitute elasticity. Were it not for the operation of the contracting principle, the substance of the *gas* would be dissipated; and but for the operation of the expanding principle, the contracting substance would form itself into a solid mass. There can be little doubt but that our atmosphere contains the elements of all the substances which compose our earth and its inhabitants; and it is highly probable that the earth is continually growing, or acquiring new accessions from the atmosphere, and that it has been altogether formed in this way, or from the atmosphere—under the controul and direction of infinite Wisdom and Power. But the atmosphere is in no danger of being exhausted, for, in any rational hypothesis, it must be supposed interminable; the *air* must extend through infinite space, for it would be absurd to suppose, that an elastic fluid should be terminated by a *vacuum*.

Before the formation of the heavens and the earth, the substances which compose all things were probably distributed, by their own equal attractions and expansions, throughout infinite space; and it would of course, require all the power in the universe, or if this phrase is improper, of infinite power, to break the equilibrium,

and to compress a small part of the universal matter into a solid, or sensible form.—What the origin is, of that plastic energy, called *chemical attraction*; whether it is the result of the combined tendencies of the several simple substances, or efficient causes, and is inherent in these causes, or is entirely dependent on the will of Him who presides over all these operations, it would require deep and undivided attention and research, to discover, and perhaps would not reward the toil by disclosing itself to the enquirer.

As knowledge and science are desirable, only as they are useful and applicable to the affairs of life, we will hazard an attempt to identify the efficient cause of gravitation, as it appears to the metaphysician, with the corresponding, or the *same* principle or substance, as it appears to the naturalist and the chemist. This attempt will, perhaps, be scouted, as was Galileo's theory of the earth; but we firmly believe in the correctness of our theory; yet if we should hereafter be convicted of error, it will not require a *holy inquisition* to make us recant.

The simple substance which, in chemistry, is called *hydrogene*, is probably the same with the contracting principle, or material substance. This conjecture is founded, principally, on two known facts. First, *Hydrogene* forms the solid parts of woody, or vegetable substances; but solidity, or *repulsion*, belongs to matter only, and material substance is the same one principle in all bodies; therefore *hydrogene* is the *basis* of all solid, or material substances. Secondly. The forcible condensation, or contraction of *hydrogene gas*, whenever the equilibrium of the chemical attractions of its constituents is disturbed, as in the formation of water, is the other fact on which we ground the hypothesis,

that *hydrogene* is the contracting principle, or material substance. There are other facts known in chemistry which will tend to throw light on this subject; it rests with chemists to refute, or confirm the hypothesis.

CHAPTER IV.

OF SPIRITUAL SUBSTANCE.

THE existence of a spiritual substance is a principle which is almost universally recognized. It has indeed been denied by a few speculative philosophers, some of whom have declared their conviction, that we have no knowledge of any thing beyond our own ideas. But this doctrine has always been predicated on the principle, that All things are made of nothing. The existence of matter has been denied on the same principle. Some have admitted the existence of matter, while they denied that of spirit; for, say they, if all things are made of nothing, it follows, that neither matter nor spirit are the efficient causes of the phenomena; that, consequently, the phenomena have no necessary connection with the substances; and that it is then obvious, that for aught we know matter may both gravitate and perceive; all the phenomena in nature may belong to one and the same substance, and that substance may be matter. If all things are made of nothing, matter is not the *real* agent in gravitation, any more than in

thought and perception; and there is no principle on which it can be either affirmed or denied, that spirit is essentially different from matter.

The annals of philosophy do not record any regular attempt to investigate the evidence of the existence of spiritual substance; or to analyse the procedure of the mind in the discovery of this substance. Hence we have no regular science, or no principles established in a regular way, respecting the existence and nature of spiritual beings.—No doubt it would be deemed absurd, if we should talk of investigating the nature of spirit, by *experiment and observation*; yet all the knowledge we possess of spiritual substance is derived from experience. But as this method has not been adopted regularly, in the philosophy of spirit, it has not been pursued with advantage. That spirit exists, is taken for granted, but it is contended, very unphilosophically, that we neither know, nor can discover what is the *essence* of the mind or of spirit. We hope to make it appear, that the *essence* of the mind is known in fact, not to philosophers only, but that it is recognized by the common sense of mankind.

In the philosophy of mind it has been customary to assume, as a first principle and an undeniable fact, that the mind is a *simple essence*; or, that the simple spiritual substance constitutes the whole of the mind, and is the efficient agent, not in perception only, but also in motion; that it originates the actions of the muscles, and performs all the complex operations of the mind. It is believed that the *essence* of the mind is some mysterious unknown thing—something *beside* the *power to perceive* and the *power to move or impel*; it is believed that these *powers* are, not the ultimate efficient causes of the phenomena, *perception and impulse*, but that they

are *qualities* or *attributes* belonging to something else, which is called the *essence* of the mind, the knowledge of which, it is said, is beyond the reach of the human intellect. It is not pretended that there is any logical evidence of the existence of a *substratum* of these *powers*; it is not alledged that a simple *essence*, to which they necessarily belong as qualities, is actually perceived; the *power* to impel, and the *power* to perceive are not *operations*, from which we would be bound in reason to infer the existence of an *agent* or *cause*. Yet it is on the ground that these *powers*, the power to perceive and the power to move, are *attributes*, or *qualities*, that they are supposed to belong necessarily to a *substratum*, or to something which is called the *essence* of mind. Now the *essence* of any thing, is that which *makes that thing to be what it is*. But what is it that makes the mind to be what it is, or to be mind? It is the power to perceive, and the power to impel that makes mind to be mind. Therefore, the power to perceive, and the power to impel, constitute the *essence* of the mind. It is also received as an incontrovertable principle, that Mind, or Spirit is unextended and indivisible.

It is not intended to enter into an inquiry here, respecting the nature of the human mind. Mind, or that being which both thinks and acts,—which both perceives and impels, is a compound substance, consisting of power and spirit, or matter and spirit. The simple spiritual substance *perceives*; its operation is uniformly perception; therefore it does not impel. Like causes produce like effects. Besides, it has already been proved, that the power to impel is not a quality, but a substance, and as power, as well as spirit, is essential to the constitution of mind, it follows that mind is a compound substance.

The nature of the spiritual substance is the subject of the present inquiry, and it is proposed to establish the position, that Spirit, in its elementary state, is a self-existent independent being, and the efficient cause of perception; that previous to its entering into the constitution of the mind, it exists in an elementary state; and that it extends throughout all space, and pervades all bodies, animate and inanimate.

The simple fact, that *Spirit perceives*, is a fundamental principle in the philosophy of Spirit, or of Mind, as distinguished from matter; it is a general fact precisely analogous to that of the gravitation of matter. These simple ultimate facts present themselves to every mind capable of observation and reflection; and it is perhaps on account of its being so familiar to the mind, and on account of its simplicity, that the former principle—spirit perceives—is almost overlooked in the philosophy of mind. To deny either of these simple general facts, would be to confound truth and falsehood, and to undermine every principle of philosophy. Yet it is, in effect, to deny these principles, to affirm, that Spirit impels, or originates motion, or is the efficient cause of gravitation. *Like causes produce like effects.* But this principle is inapplicable to a substance that is made of nothing; and that is not the real cause of any effect. If spirit is made of nothing, it does not really perceive; it is incapable of any operation in its own capacity; and on any principle, it is just as rational to suppose that *matter perceives*, as that *spirit impels*, or originates motion.

When natural reason lifts her voice, she finds a ready accordance in every unprejudiced mind. It will be readily granted, that *spirit perceives*, and that it is the only species, or kind of being, capable of perceiving; in a

word, that whatever perceives is spirit; and that what does not perceive, is not spirit. Whenever we observe a specific phenomenon, we infer the existence of a specific efficient cause, or substance; whenever we observe *perception*, or *feeling*, we infer the existence and presence of spirit; and this amounts to, or includes all that we know of spirit; every genuine principle of the philosophy of spirit, is implied in this one, that spirit perceives. If spirit is that which perceives, and is the only thing which perceives, it is the efficient cause of perception; it is that, and that only which is *able* to perceive. But like causes produce like effects; therefore, spirit does not impel, or produce any phenomenon different from perception.

The *power* to perceive, is the *essence* of Spirit. There is not the least ground to suppose the existence of any other *essence* of spirit, or of a being to which the power to perceive is an attribute. The *power* to perceive is not a *quality*, requiring a subject, or *substratum*; it is not an *operation*, from which reason is bound to infer the existence of an agent. *Perception* is an attribute of spirit; the *power* to perceive is spirit itself; or it is that which perceives; there is no *power to perceive*, excepting the efficient cause of perception, or that which actually perceives.

If Spirit is the efficient cause of perception, it must be a self-existent independent being, in its elementary, or primitive state, for that which depends on some other being for its existence, can have no efficiency of its own; it cannot of itself produce any operation; it is not an *efficient cause*. Yet every individual spirit, although in itself an efficient cause of perception, is indebted, for its individuality, and for its situation relatively to surrounding objects, to the Creator, who separates it from

the common element, and unites it to an organized body, through which it acquires all its knowledge, and all its enjoyments.

In opposition to this it will be alledged, that the Supreme Being has power to create, and actually does create, from nothing, all the spirits, or souls of men. But beside that this is bare assertion without the shadow of proof, it is absurd, for the reasons already mentioned. to suppose the possibility of an efficient cause being created from nothing. This will be met with the argument, that infinite power can do all things; that there is nothing too hard for infinite power. It is true, that in the proper sense of the terms, there is nothing too *hard*, or *difficult* for infinite power; yet it will not be denied that there are some things impossible even to infinite power. Infinite power cannot make two, equal to four, or a *non-entity*, equal to an efficient cause. There is indeed one sense of the words, in which it is true, that substances are made of nothing. When we look around in space, we say, that we see nothing, that the space is empty; yet this may be occupied by air, or by light; *substances* which enter into the composition of bodies, but which, in their elementary state were considered to be nothing. The world and all that it contains was once in that state; "the earth was without form, "and void," yet it *was*; substances existed, but without a sensible *form*; their operations could not have been perceived by organs of sense such as ours.

When it is asserted that infinite power creates substances from nothing, it should in reason be shewn, either that it is within the compass of infinite power to do this thing, or that in fact it has been done. But neither of these can be shewn, on the contrary, the absurdity of the supposition is palpable. Can infinite

power think, or perceive? We speak of mechanical power, or the power to impel. No, certainly: power does not, cannot perceive; it is spirit only that perceives, or that can perceive. If infinite power cannot produce the phenomenon, is it not absurd to suppose that it can create, from nothing, the efficient cause of the phenomenon? The sole operation of power, is *motion*, or impulse, which never can amount to, or create, its own efficient cause. It would be equally absurd to suppose that Spirit can create other spirits from nothing. Spirit, then, is a self-existent, independent being, and is the efficient cause of perception.

The spiritual substance exists in an elementary state, previous to its entering into the constitution of the human mind. The proof of this proposition will be drawn from known facts, and from the attestation of sacred writ.

It is a well known fact, that the substance of the body is continually wasting, and continually renewed by the food we take. But who shall dare to conjecture, in the face of the prevailing *theories* respecting mind, or spirit, that this too is constantly expending itself, and constantly repaired by the element from which it first originated. Yet there is hardly room for conjecture, it is a fact, which is obvious to the attentive observer, that the *principle of life* is thus wasted, and supplied; though the *element* from which it is supplied, is different from that which replenishes the bodily substance, and is received through a different *organ*.

The vital air which we inhale by the lungs, is the food of the principle of life. Every exercise of animal power exhausts, or lessens the principle of life, or the *sensorial power*; and is followed by an increase of breathing, to obtain a fresh supply, and an accelerated

circulation of the blood, to distribute that supply throughout the system. There is no fact more clearly ascertained, than that *life* results from the air we breathe, and *death* from the exclusion of air. So long as we breathe, we live; but the most perfectly organized body, is dead until it breathes. "God made man of the dust of the ground, and breathed into his nostrils the *breath of life*, and man became a living soul." But what is the *principle of life*? That which is called *life*, consists of actions, or motions excited by *stimulus*; and stimulus is something *perceived*, or *felt*. The *principle of life* then, is that substance which is capable of being stimulated, or of *feeling*, or *perceiving* the action of stimulus. But that which *perceives*, or *feels*, is Spirit. Wherever there is perception, there is spirit; from the lowest or dullest feeling of sense, to the highest exercise of reason, the same species of phenomenon, requires the same species of efficient cause. And by whatever name we call that phenomenon, whether we term it feeling, sense, or perception, it is essentially the same; it is the distinguishing characteristic of spiritual substance; and it is the prominent feature in all the complex phenomena of reason and of sense. It is then an obvious fact, that the air we breathe contains, and constantly supplies the aliment of that substance, which is the principle both of life, and of intelligence.

That spirit exists in an elementary state, is attested by the word of the august Being, who, by His creative power united our bodies and spirits, and who is most intimately acquainted with the constitution of man. The sacred historian, by divine inspiration informs us, that "God made man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul." In consequence of the breath

of life, or the air, being breathed into his nostrils, he became a living soul. The *dust* of the ground, and the *breath of life*, are the elements from which is formed the living man, or the living soul.

We are told by the learned, that the word which is translated *wind*, and *breath*, is the same throughout the sacred scriptures, with that which is rendered *spirit*; the same word in the original, signifies *spirit*, *wind*, *breath*. This would seem plainly to imply, that the wind, or the air, is spirit, or that it contains the elementary spiritual substance. There is no part of sacred writ that forbids this implication; but the metaphysical theories of the learned forbid it. However it is generally true, that the most learned are also the most liberal, and most ready to encourage research; and with these encouraging reflections we proceed to lay before the reader the following considerations.

In the first chapter of *Genesis* it is said, "The earth was without form, and void, and darkness was upon the face of the deep, and the Spirit of God moved upon the face of the waters." It appears to be assumed by divines, that the Holy Spirit is spoken of in this passage. But surely—with deference to these respected authorities,—it is attributing to that divine *person*, an office by no means appropriate, and far beneath the dignity of his character. It is not warranted by other parts of sacred writ. for wherever the *Holy Spirit* is expressly mentioned, he is employed in revealing, either the character of God, the history of fallen man, or the mysteries of redemption. The Holy Spirit is the proper subject of the moral attributes of God; or is the agent in producing holiness, and in inspiring the mind of man with the knowledge and love of truth; but is nowhere represented as the agent in physical operations, such as *moving*

on the face of the waters. The wind, or Spirit of God spoken of in the passage under consideration, would appear to a plain mind to be that elementary spirit, or breath, or vital air, which to this day *moves upon the face of the waters*, being the fluid element next in weight to water. It was that elementary substance, which doubtless then was, and which still is one of the constituents of atmospheric air; and which supplied the first progenitors of our race, and which still supplies their descendants with the principle of life, or the spiritual part of their constitutions. And it was called the *Spirit of God*, because it was that elementary substance which was yet retained absolutely in His hands, or which had not yet been appropriated to the formation of individual beings.

There are many passages of scripture in which the *Spirit of the Lord* is mentioned, where it is evidently not the Holy Spirit that is intended. Such are the following. “And the *Spirit of the Lord* came mightily ‘upon him,’ [Sampson] ‘and he rent him’ [the lion] ‘as he would have rent a kid, and he had nothing in ‘his hand.’”*—“And when he came to Lehi the Philistines shouted against him; and the *Spirit of the Lord* ‘came mightily upon him; and the cords that were on ‘his arm became as flax that was burnt with the fire, ‘and his bands loosed from off his hands.”† No one can seriously believe, that the *Spirit of the Lord*, in these passages, means the Holy Spirit; it appears plainly to be the principle of life, or the principle of animal strength that is alluded to. The following passage has the same purport. “As the beast goeth down into ‘the valley, the *Spirit of the Lord* causeth him to rest.”‡

* Judges xiv. 16. † xv. 14. ‡ Isaiah lxiii. 14.

These passages shew pretty plainly, that the words *Spirit of the Lord*, in the holy scriptures, do not always allude to the Holy Spirit.—In the following extracts, the words *spirit*, and *Spirit of God*, evidently mean the elementary principle of animal life. “All the “while the *breath* is in me, and the *Spirit of God* is in “my nostrils, my tongue shall not utter deceit.”*—“And “the Spirit of God came upon Saul when he heard “these tidings, and his anger was kindled greatly.”† “Cease ye from man, whose breath” [spirit] “is in his “nostrils, for wherein is he to be accounted of.”‡—It is impossible to inculcate in a plainer manner, the principle, that the elementary principle, or spirit of life, is derived from the air we breathe.

That the spiritual substance has *extension*, scarcely needs any farther proof than what the foregoing arguments afford; yet as there is direct testimony from sacred writ, as well as the clearest evidence from fact to establish this point, it is proper to say a few words on the subject, especially as it will tend to confirm the position before insisted on, if it be thought to need any farther confirmation,—that spirit exists in an elementary state.

And first, of the testimony from sacred writ. “The “eyes of the Lord are in every place, beholding the “evil and the good.”|| This text, with many others, prove the omnipresence of the Spirit of God. But it is idle to go about to prove the *omnipresence*; no one will deny it. And it is probable that no one will venture to alledge, that *omnipresence*, and *extension*, are two different modes of existence,—or, that the first does not imply the last. But if the *Spirit of the Lord* is

* Job xxvii. 3. † 1 Samuel xi. 6. ‡ Isaiah li. 22. || Proverbs xv. 3.

omnipresent, or is extended throughout all space, then extension is not inconsistent with the nature of spirit; if the *Spirit of the Lord* is not distinguished from matter by being unextended, is it necessary that the *spirits of men* should be distinguished from matter by the want of extension? If the Spirit of the Lord is extended through infinite space, does not this afford strong presumptive evidence, that all spirits have their degree of extension.

But we have more direct evidence from fact, in support of the principle that spirits are extended beings. Whatever facts we possess in relation to this subject, and as they respect the human spirit, or mind, are of course derived from the testimony of consciousness. And may we not confidently appeal to the consciousness of the reader; do we not feel, or perceive with our eyes, our ears, palate, at the ends of our fingers, and with almost every part of the body? Are we not *conscious* of all this? Does not the experience of every moment confirm it? Make a farther experiment when you will; put your finger in the blaze of the candle, and you will instantly perceive that something is going forward in the finger. Whatever swift little messenger conveyed the notice of this to the central reflecting organ, the brain, it must first have perceived it itself, at the point where the action originated. There is a perception, or sensation *in the finger*; and the sensitive substance must have extended to the finger. It is to no purpose to say, that the sensation is in the mind; and that the mind is confined to the brain, or to a single point in the brain; it might as well be said that the mind is in the moon; if it is not present in the part where we are *conscious*, we know not where it is; consciousness is then no guide; its testimony is false.

But, to return: we are conscious that there is a *sensation in the finger*, and this consciousness is the only evidence we have, on the subject of the locality of the sensitive substance. It is a fact that the finger feels, or is conscious of the violent change produced within it, by the action of the fire; no sophistry can disprove this fact. The sensation is without doubt in the *mind*; this cannot be denied; wherever there is sensation, there is mind; but must we, in spite of fact, conclude from this, that the sensation is in the brain, and confined to a single point there; or should we not rather conclude that the mind extends to the finger, and to every point where sensation is felt. There is no fact that forbids this conclusion; it is not inconsistent with any principle established in reason. If, where there is sensation there is necessarily mind—and if it is a fact that there is sensation in the finger, then the mind extends to the finger; the mind has nearly the same extension with the body.

But in defiance of the testimony of consciousness, it will, perhaps, be insisted on, that sentient beings are unextended; we shall be told that the *pain* produced by the heat of the candle, is not really in the finger, but in the mind which occupies a point somewhere in the brain. But this is borrowing the question; when it is proved that the mind is unextended, then we shall be compelled to admit that our sensations are confined to a point; but the only evidence calculated to prove that the *mind* is unextended, would be the fact, that our *sensations* are confined to a point. Now this fact can be ascertained only by experiment and by the testimony of consciousness; but consciousness does not testify the fact; on the contrary, consciousness testifies that sensation takes place in the external organs,—hence it is that

they are called the organs of sense, or of sensation;—if we are to rely on the testimony of consciousness, a single sensation extends itself over a considerable surface, or throughout the whole extent of an organ. There is no evidence to be drawn from consciousness, that the pain which is apparently in the finger, is really in the head.

We are not conscious that our sensations are altogether in the brain; we are not conscious at all of sensation in the brain, excepting when it is disordered. It is not to the brain that we refer our pains and our pleasures; they originate apparently in the bodily organs; our joys and our sorrows we refer to our bosoms—love, hatred, anger, benevolence we attribute to the *heart*, by which is meant, not the muscular organ so called, but the spirit, residing in the bosom as well as in the head. The head is no doubt the principal seat of intelligence, it is there all the organs meet; it is to this common receptacle is brought all the *notices* of external objects; it is there these notices, or *impressions* are analysed, and our inferences drawn as to the existence, nature, and positions of external objects, and our connexions with them. But it is in the bosom we experience the feelings, the sentiments, and the perturbations excited by those objects; it is in the bosom, in conjunction with the brain, that we approve, or disapprove. We perceive right and wrong in the brain, but we feel good and evil in the heart, that is, throughout the whole of the nervous system, including the brain. To sum up all in one word, wherever there is blood, and nerve, and vital air, there is sensation.

There can be no doubt, but that the external organs of sense communicate with the brain, and with it form one grand organ of sensation, or perception, and that

the spirit, or mind, having her principal seat in the brain, has there the advantage of receiving and comparing all the impressions, or ideas conveyed through the several external organs, and of drawing her conclusions from the whole. It is thus we learn to estimate distance, by comparing the ideas of the organ of sight, with those of the organ of feeling.

But if the spiritual substance exists in an elementary state; and if in the human system it is continually expended, and supplied again by the air we breathe, does not this destroy the *identity* of the mind?—By no means. The identity of the mind does not consist in its having retained the identical parts, or *particles* of *spirit*, any more than the identity of the body consists in its having retained the same particles of matter.—The sameness of the spiritual substance cannot constitute the identity of the mind,—first, because the spirit does not constitute the whole mind. Mind is a combination of power and spirit, or matter and spirit. The only operation and characteristic of spirit, is perception; there is nothing in one spirit, simply as spirit, to distinguish it from another spirit; every spirit perceives. Simple spirit is incapable of acquiring a fixed and permanent form, or a distinct, or individual character.—Secondly. If we consider the mind as formed of two distinct substances, *power* and *spirit*, still there is nothing simply in this combination of substance to distinguish one mind from another; power and spirit is the same in one mind, with power and spirit in another mind. One mind is distinguished from another, not by perception, but by the *objects* of its perceptions, or about which it has been conversant, or by the *ideas* and the knowledge it has acquired, and by its habits of thinking and feeling. The identity of the mind consists in

the identity of its ideas, associations, and habits of thinking and feeling. But knowledge, and ideas, and habits of thinking and feeling, can be acquired only through the medium of organs, adapted at once to receive impressions from external objects, and to feel, or perceive these impressions; that is, organs composed of matter and spirit; *matter*, to be acted on and to react, or to receive impression from matter; and *spirit*, to perceive, or feel the impression. Such in fact are our organs of sensation. It is the material part of the nervous system, or mind, which receives the impressions from external objects, or which is the *subject* of the ideas, or configurations or modes of operation communicated by these impressions; but it is the spiritual part, which is in combination with the material, that perceives these impressions. Every repetition of an idea in the mind, that is, every repetition of a particular action, or operation, in the external organs of sense and the brain, increases the facility, and the tendency to repeat this same idea, or operation, and in all probability increases the bulk and consistence, or solidity of the organ, or organs, both external and internal thus brought into action;—just as the repetition of a particular action in the muscular organs, increases the size of the muscle, and the facility of repeating that action.

We come now to consider more particularly, the *physical* and *chemical* characters of spiritual substance; or to inquire in what *form* it exists in the physical, or external world, and in what way it exhibits itself to the senses. It is a known fact, that the spirit, or mind influences, and is influenced by bodily substances; yet, perhaps, the attempt to investigate this fact, or to inquire into the *manner* in which this reciprocal influence is effected, will be pronounced vain and idle. But

surely it is the office of philosophy to explore, and not to shut up a field of inquiry. Therefore, we hope to receive the indulgence bestowed on adventure, instead of the censure due to temerity.—The problem, as to the manner in which matter and spirit reciprocally affect each other, is to be solved only in one way,—that is, by identifying Spirit with some one of the substances familiarly known in what is called the physical world, and by shewing what is the *modus operandi* of this substance, or the manner in which it affects, and is affected by matter.

The manner in which it is common to identify one substance with another in philosophical investigation, is in reasoning from *analogy*, the analogy of the phenomena. It is on this species of evidence that any two substances are pronounced to be of the same kind, or species; the soul, or spirit of a man, and the soul or spirit of a beast are called by the same name, or perceived to be the same species of substance, on the evidence of analogy, the analogy, or *sameness* of their phenomena; the lightning of the heavens, and the electric *aura*, are pronounced the same, on the same kind of evidence; and ærial substances are known to be material, on the evidence of analogy, or because they gravitate and repel. We propose to shew, on the evidence of analogy, that the substance which in metaphysics is denominated *Spirit*, is the same with that which in chemistry is called the *matter of heat*, or *caloric*.

It is apt to be imagined, that there is no metaphysical reasoning at all attending the discovery and perception of material substance; we seem to perceive it by the senses; it obtrudes itself so continually on observation, that without reflection and a laborious abstraction, we imagine that we perceive the substance immediately.

while in reality it is only the phenomena that are perceived immediately, or by the senses. At the same time, Spirit is conceived to be an invisible mysterious thing, and that even its operations are necessarily invisible and mysterious. It is admitted, indeed, that the phenomena of spirit are perceived by internal sense, or consciousness; but it is believed that they can in no wise affect the external organs of sense. But material *substance*, or the *basis* of gravitation and repulsion, is as completely invisible to the senses, as the spiritual substance; neither the one nor the other is perceived immediately, or in the way that we perceive operations. The perception or knowledge of matter, as well as the knowledge of spirit, is the result of a metaphysical investigation of the phenomena.

The *modus operandi* of spirit is perceived by the external organs of sense; and we have ventured to term this, the *physical* characteristic of spirit. There is no good reason to aver, that the phenomena of spirit may not affect the organs of sense as well as the phenomena of matter; or that they may not affect the external, as well as the internal sense, or consciousness. For what is internal sense; or what is consciousness? It is the perception, or feeling of the operations, or phenomena which take place within the mind.—And what is external sense, or sensation in the external organs? It is consciousness too; or it is the perception, or feeling of the changes, or operations communicated to and produced within the external organs, by the impressions of external objects. It appears then, that *sensation* in the external organs, and *consciousness* within the mind are precisely similar; they differ only in their localities; consciousness in the mind, is the sensation, or perception of what takes place within the mind; and sensation

in the external organs, is the consciousness or perception of what takes place within the external organs. Sense and consciousness perceive phenomena, or operations, but do not take cognizance of substances. If the internal organ of consciousness, or sensation perceives the phenomena of spirit, why may not the external organ of sensation, or consciousness perceive the phenomena of spirit? Is spirit less efficient than matter? Is it matter only that has the power to awaken the sentient organ? Or has the sentient principle in the the external organs the power to perceive the phenomena of matter; and not the power to perceive the phenomena of spirit?

The organ of *feeling* perceives gravitation and repulsion; and reason infers an invisible cause, a something which gravitates and repels; and this *something* is called *matter*. The external organ of feeling perceives *heat* also; that is, the phenomenon called *heat*; and it is inferred, that there is a *substance*, or *matter of heat*; we do not refer this phenomenon to the same cause, or substance which produces gravitation. Though the substance of heat is, improperly, termed *matter of heat*, it is notorious that it does not gravitate or repel. The substance of heat is immaterial. Heat is capable of being *accumulated* to an unknown extent, by means of its chemical attraction for material substance; but this is quite different from *gravitation*, which is the necessary operation of matter, independently of chemical affinities. Heat radiates, or expands; but this is different from the repulsion of matter, for while heat radiates, it penetrates solid bodies, it does not repel them. By means of its chemical attraction, heat imparts to bodies its own mode of operation, *expansion*, and causes matter to exhibit phenomena essen-

tially different from contraction, or gravitation. It is in consequence of this tendency to expand, together with its chemical attraction for material substance, that heat produces solution and decomposition in unorganized bodies; and it is in consequence of the same tendencies, physical and chemical, that it gives to organized bodies a peculiarity of character called *life*.—It is a known fact, that the living principle is continually counteracting the contracting, or gravitating tendency of the material part of the animal system. Many of the animal functions are performed by means of expansion; and it is this mode of operation that distinguishes the living from the dead body;—or the phenomena of life, from simple gravitation and repulsion. It is by expanding the chest that we breathe; it is by alternate contractions and expansions of the heart and arteries, that the blood is circulated, &c. It has been shewn, that the *mode of operation* of the material substance, or of power, is contraction; that in all animal actions, the primary operation is contraction. But when a muscle has contracted, the material part has not any power nor tendency again to expand; consequently its actions would be at an end, if there were not another species of energy, or power, to expand the contracted muscle. The contractions of matter cannot be counteracted but by direct expansion. But what is it that is known to counteract and controul the contracting tendency of matter in the animal constitution? It is the spirit, or the principle of life.

Expansion then is the mode, or manner in which spirit operates upon, and controuls matter.—But expansion is the mode or manner in which *heat*, or *fire* operates upon and controuls matter; therefore, *heat* and *spirit*, are the same substance.—It is probable that heat causes bodies to expand, not by *force*, which is the kind

of energy exhibited by power, or matter, but by its own tendency to expand, united with its chemical attraction for material substance. The *force* exhibited by expanding bodies, is the energy of power; but the *direction* of that force, that is, from a center, is the operation of spirit, and the material substance is carried along with the spiritual by chemical attraction.

There are certain metaphors in the language of cultivated nations, which plainly indicate a common sentiment, or apprehension among mankind, that external fire, and the internal spirit, are analogous, or that they are essentially the same. When the mind exhibits much excitement it is said to be *heated*, or *fired*. The mind is *fired* with a thirst of glory; *fired* with a thirst of revenge, &c. Then there is the *fire* of genius; the *fire* of anger; the *fire* of ambition; the *fire* of devotion.—Prometheus stole *fire* from heaven, to animate his man of clay.—“When I mused, the *fire* burned,” said the royal poet. The following, from the same pen, is an expression without any metaphor of the sameness of spirit and fire. “Who maketh *spirits* his angels,—a “flame of *fire* his ministers.”—Passion is said to be a combustion, in which the body is consumed by internal fires. Animal life is a slow combustion, in which the body is exhaled by the operations of the spirit, and if not constantly replenished, would cease to furnish fuel for the vital flame.

But metaphor, it may be said, is not a proper vehicle of philosophical truth. Yet metaphor is founded in analogy, and analogy certainly is one species of philosophical evidence. Analogy consists in the *sameness* of the mode of operation, or of some circumstance attending some two things. There is a loose analogy, where the circumstances which correspond in the two things

which are analogous, are remotely connected with those things, or are the *remote effects*, and not the immediate necessary operations of those things. The following metaphor presents an instance of this loose analogy. "If any man seem to be religious, and **bridleth** not his tongue," &c. This metaphor is founded in **the** analogy between a *bridle* and a moral *precept*, or *truth*. The point of analogy is the *restraint* imposed by the bridle, and by the precept; but the effect is remote from either cause; and the *mode of operation* of the one cause is different from that of the other. A bridle restrains by *force*, and by the pain it inflicts; but a moral precept, or truth restrains by its *beauty*, and by the pleasing sensation it excites in the mind.—It would be improper to rest the proof of a principle in philosophy on this vague analogy. But there is a strict and philosophical analogy, which consists in the sameness of the immediate effects, or of the modes of operation of the analogous causes, and which indicates the sameness of the causes themselves. This strict analogy subsists between spiritual substance, and the substance of heat; the *mode of operation* of the one, and of the other, is the same; it is expansion; and this is the point of analogy between them.

Spirit, or the substance of **heat**, pervades all bodies animate, and inanimate. "Whither shall I go from thy Spirit? or whither shall I flee from thy presence." The Spirit of God is every where, it extends throughout all space, through that which is occupied by body, as well as that which is not. So it is with the substance of *heat*. From its inherent tendency to expand, it disseminates itself universally; it cannot be excluded from any part of space, nor totally abstracted from body. But the phenomena of spiritual substance, that is,

perception and *sensation*, as they appear to our internal consciousness, and as they exhibit themselves through the external *signs* of feeling, and of enlargement of mind, are much more obvious, or discoverable in the animal and rational worlds, than in the vegetable and mineral. Hence the common opinions taken up without investigation, that the spiritual substance belongs exclusively to those higher parts of creation. But if spirit operate by expansion, if it expand in perceiving, and if it is by this mode of operation that it influences and controuls matter, then wherever we observe this phenomenon, expansion, we are bound in reason to infer the presence and agency of spirit.

But when we seek the phenomena of spirit in other beings beside ourselves, we look not for expansion; for we are not *conscious* of this *mode of operation* in perceiving; and if we were, we could not see the expansion of other minds, which are invisible; in all organized bodies, the sensitive part of the system is furnished with a covering, at all points sufficient to conceal and protect the immediate subject of sensation, though not to exclude all impressions from without. But where we expect to discover the sensitive substance, we look for its secondary effects in the actions of the beings or things wherein we expect it to reside; we look for the external signs, of perception, or feeling, and of choice or volition, in the actions of other beings, and when we perceive a train of actions which manifestly tend to a desirable end, and which are too complex to be the effect of accident, we always infer, that they spring from design, or volition, and that the spiritual substance is present. That is, where these external signs are exhibited by animal beings, we fail not to recognize the spiritual substance through them. And if we can trace the

same external signs in the vegetable and mineral kingdoms, will it not be a fair induction to refer them to the same invisible causes, or to infer that they originate in sensation and volition, the operations of spiritual substance. It is not necessary that spirit exhibit the highest attribute of mind, in order to manifest its existence. *Reasoning* implies, not only perception, the simple operation of spirit, it implies also the presence of *ideas*, or of a subject on which reason is exercised, and *ideas* require bodily organs; reasoning also implies some knowledge of truth, or of the necessary relations of things.

Let us then endeavour to trace those external signs of sensation and volition, in the gradation from a man, to a mineral, and see whether there is a point at which these signs entirely disappear, and at which spirit ceases to exhibit her influence. In man these signs of perception and volition shine forth with superior lustre, for they are blended with the signs of reason, and of *high resolve*.—Take away reason from man, or take away that internal organ of thought and perception, in which all the external organs meet, and which, being enlarged and extended as the mind acquires new ideas, has the power to reflect, or repeat the ideas at pleasure, and, by comparing and analysing, to discover the relations of things,—take away this organ, and there remains a mere animal, a sensitive system, but without the *apparatus* for reasoning. The simple spirit, or power to perceive, is the same in this as in the former, the same in the mere animal that it is in the rational being; but the organ of comparison, the store house of assorted ideas is gone. Still the organs of sense remain, and the principle of sensation and volition.—Take away then the external organs of seeing, hearing, tasting and smelling, and take away the muscles of locomotion, and

we shall no longer have an animal, but we shall have a vegetable; the system that remains may still vegetate. Does the perceiving substance, or principle of sensation and volition depend on the animal organization? and is it gone with the organs of sense—so called? No, there is an *organic system of vegetable life*, resembling that of animal life. The vegetable has its secretory organs, it has its circulatory, respiratory and nutritive systems, as well as the animal. Secretion implies selection, or choice, or volition; and this implies perception. The spirit, or perceiving substance still attends us; the vegetable exhibits the external signs of internal feeling and selection, or choice; circulation, respiration and nutrition, cannot be accounted for from the laws of matter; they cannot be resolved into contraction and repulsion. Now destroy the organic system of vegetable life, and the vegetable dies; there remains no organized part to supply the want created by the continual exhalation from all bodies that vegetate. After death the exhalation, or decomposition goes on, for a short time, just as it had done before; presently it becomes more rapid, and at last the earth *returns to the earth as it was*, and the spirit, or principle of vegetable life, ascends to its native element in air; for it is notorious, that after the abstraction of reason, of animal organization, and of vegetable organization, that which remains is not *all* matter; it does not all gravitate and return to dust; a part ascends by its own elevating, or expanding power,—carrying with it a portion of the gravitating substance. The expanding principle must, therefore, be an immaterial efficiency, existing independently of any organization. This principle appears to be incapable, at least in the present state of the chemical affinities, of disengaging itself altogether from matter; a fact

which seems to be signified in ancient mythology, by *Vulcan* having fastened an anvil to the feet of *Juno*, to prevent her escape from the earth, or from the atmosphere.

But to return, wherever the external signs of sensation and volition are observed, there reason perceives spirit. It is not necessary that spirit should reason, to give evidence of its existence; the faculty of reasoning is not necessary to constitute a voluntary agent, for the lower animals act voluntarily, though they do not reason. It will be granted that spirit, or the perceiving substance is the principle of animal life; that this principle may be traced from man to the elephant, and from the elephant to the oyster. There are but a few steps from the oyster to the *sensitive plant*, and at each step the external signs of sensation and volition attend us. Yet though the external signs are obvious, we shall not be allowed to draw the same inference from them here, as when they are exhibited by animals. It will be denied that the actions of this plant are really the signs of sensation and volition. It is easy to affirm, or deny, much easier than to analyse. But how shall the objector convince me that his own actions are voluntary? His telling me so is not proof; but my own observations convince me. I see him take food and drink, avoid danger and seek good. So does this plant; it secretes, or selects the juices proper for its nourishment; and it shrinks from danger. The inferiority of its powers to obtain these ends, is not proof of the absence of volition, or of sensation; that inferiority consists, not in the want of feeling and desire, but in the want of more perfect bodily organs; if the phenomena are of the same kind, though not the same in degree

with those of animal life, they require the same kind of efficient cause.

Perhaps in the strict sense of the word *volition*, the actions of the plant, or indeed of the lower animals, cannot be said to be voluntary. If volition be considered as implying design and forethought, or an expectancy of what is to be the effect of the action, or if it imply a conception of the manner of the action itself, it would be absurd to attribute all this to the plant. Nor is it necessary to insist that the plant acts voluntarily in this sense of the word; if it exhibit signs of *sensation*, this is sufficient for our purpose; sensation belongs to the spirit only. But, it may be said, though the plant is apparently, it is not really sensitive. But how can this be determined, unless we admit the phenomena as evidence of the fact? We cannot "reason but from "what we know." The plant exhibits the external signs of sensation; on what established principle is the reality of the fact denied? And after all, how far is the oyster elevated in dignity above the sensitive plant, that we must allow the former to have a *spirit*, while we deny it to the latter? It will not be denied that the oyster is sensitive really; then why not the plant?—In truth there is the same *kind* of evidence to prove the sensitiveness of the plant, that there is to prove the sensitiveness of animals.

There are certain actions, or operations in the animal economy which are called *involuntary*, and which are so with respect to the *mind*, or to the *organs* of sense and of reason; but if actions may be termed voluntary on account of their being prompted by sensation, then every action which is not resolvable into gravitation and repulsion, is voluntary. If the oyster acts voluntarily, so do the *organs of animal life*. The circulatory,

respiratory, and nutritive systems have their *nerves*, and their sensations, or they are capable of being *stimulated*, as well as the external organs of sense through which we acquire the knowledge of external objects; and their peculiar actions arise as really from the influence of the spiritual, or sensitive substance, as do the actions which result from hearing, smelling and tasting, or even from reason. Those organs of animal life do not, indeed, communicate their sensations in a very sensible manner to the mind; nor do their *actions* originate thence; each system has its own distinct sensations and actions; hence these *actions* are involuntary relatively to the *mind*; but they are not so absolutely. Simple perception, or sensation is absolutely involuntary, and so are gravitation and repulsion; but every action, or motion that is not resolvable into gravitation or repulsion, is the result of perception.

It is obvious that the *sensitive plant* perceives, or feels the contact of other bodies; its actions exhibit the signs, or evidences of sensation; and why should the plant be deemed incapable of sensation when the cyster is deemed capable? Though the organization of the animal may be more complex, and more perfect than that of the vegetable, the sensitive substance, or power to feel, is not an *effect* of organization. The more perfect, or the more complex the organization, the more extended is the sphere of observation; but perception is not the more real. The meanest vegetable exhibits evidence of sensation; it has a circulatory, a nutritive, and it is said, a respiratory system; it absorbs particles of air and of light. Its internal organs carry on certain chemical processes, in which liquids are secreted for the nourishment of the plant. This is not the operation of material substance; matter does not exhibit

the phenomena of life; it is incapable of being stimulated; wherever there is excitement there must be something to be excited, or to *perceive* the *stimulus*.

Spirit then is a constituent part of vegetables. But the gradation does not stop here; minerals also are formed by a gradual increase, or growth; they exhibit phenomena which do not belong properly or essentially to matter. We say a vegetable has *life*, because it is acted on—not mechanically, but according to the laws of life—by the soil, the air, and the light around it; and in its turn acts upon these things, producing chemical changes and assimilating them to its own substance. Minerals also are acted on, not mechanically—and act upon light, heat, air, and other substances in contact with them, producing chemical changes.—In the phenomena of chemical combination and decomposition there is something essentially different from the phenomena of simple matter; there is some principle, or substance that feels and selects, that deserts one combination of substances and enters into another. This is not a mechanical operation; it has no connexion with gravitation, or repulsion.—But a mineral does not crawl, like a worm, therefore it does not feel. Is this a philosophical conclusion? The mineral has not the organization which enables the worm to crawl; but it has *motions* which are not resolvable into simple gravitation and repulsion. Why should *oxygen* desert one combination and enter into another matter? has no likings or antipathies. The perceiving, selecting substance is probably the stirring agent in all the phenomena of the laboratory; perhaps these phenomena might all be resolved into the contractions and expansions of the material and spiritual substances.

Methinks I hear some one exclaim, What! the *mind*, the *immortal spirit* reside in *fire*, in air, in vegetables? Does the carrot feel pain in being prepared for the boiler? Is the oak sensible of injury when the feller is at work?—What agonies he must feel if this were true; what cruelty to pluck a rose, or even to pull a noxious weed. Can the beneficent author of nature have ordered things so? Can divine goodness have created a universe of sensitive beings, every one the sport of accident, and subject every moment to suffering? A universe in agonies and convulsions!—Softly, gentle reader. All this is not implied in our doctrine; when we give free exercise to sentiment, the imagination is apt to carry us far beyond the limit of philosophical truth. Some of those alledged consequences do follow from our theory; but they are also undeniable facts; they are observed in nature, and therefore, instead of forming an objection to our theory, they tend to establish it. Independently of inanimate nature, there is a universe, or at least a world of sensitive beings, the sport of accident and the subjects of pain—no disparagement to divine goodness;—and there are actual *convulsions* of nature, which are not surely the throes of inert matter. But though spiritual substance is a component part of the oak and of the carrot, though the vegetative process is produced by the action of *stimulus*, and though to be stimulated, implies feeling, or *perception*, yet it does not imply that the oak or the carrot is sensible of *pain*. Pain is more than simple perception; pain is the *perception of evil*. Though the tree perceive, or feel certain things, it may not perceive this particular object, that is, *evil*; it will of course, not perceive all that a more perfectly organized being will perceive; and though it should perceive the stroke of the axe,—

which however has not been affirmed,—yet it may not perceive any evil in that stroke, it may not experience any *pain*. A vegetable may be calculated to feel the stimulating qualities of the soil about its roots, without being capable of perceiving *injury* in its own destruction. But were it admitted that these things feel pain under the knife or the axe, should this shock our reason more than that the lobster should exercise the perceptive faculty, or should it do more violence to our feelings than the death of an ox? Would it, even in that case, be more cruel to pluck a rose, than to draw a fish from the water?

Spiritual substance is in its own nature immortal; but individual spirits, beings, parts separated from the common element, and joined to a portion of material substance, or *power*, are of course subject in themselves to decomposition, or dissolution. Their immortality is a gift. Spirits are immortal from no other cause, or necessity, than their being self-existent. No being can exist independently, in an absolute sense, unless it is self-existent; God himself cannot make a being independent of Himself.

Spiritual substance is the principle of animal and of vegetable life, and it is concerned in the production of all those phenomena of inanimate nature which cannot be resolved into gravitation or repulsion. That the Supreme Deity is the immediate efficient agent in all the phenomena of vegetable growth, and decomposition, as well as in all the combinations and decompositions of mineral substances, is a doctrine that is both impious and absurd; it attributes all the deformities, all the abortions, and all the decompositions and disgusting changes and appearances to the immediate agency of—we dare not finish the sentence.

CHAPTER V.

OF THE NATURE OF TRUTH.

PILATE asked, What is truth?—and it is still made a question, what is the correct definition of truth. Some have professed to believe that there is really no such thing as truth. To this day it is believed and taught that there are no necessary truths in natural philosophy; but this belief arises out of the principle, that *substances* are made of nothing, and have no necessary *relations*; for to affirm a truth, is to affirm some *relation* of things. It is even now set down as undeniable, that truth is not a real, *substantial* thing, that it has no *efficiency* in itself, and performs no part in nature. It is thence that it is believed to have no infallible *criterion*, and to be incapable of being logically defined.

Yet though we should not be allowed to call truth by the general name of *substance*, it will readily be allowed to be self-existent, or necessary, and eternal; we shall hardly be permitted to say that truth is an *efficient cause*, and the basis of a specific phenomenon; yet we think it will be granted, that there is a certain state of things which cannot exist without the influence, or operation of truth, that it is necessary to order, harmony, beauty.—It is implied in our systems of religion, that truth is the *conservator* of the soul; and in our ethics, that it is the bond of society, and the source of all that is fair, and lovely, and honorable, and of good report.—Yet this theory, correct in itself, and founded in reason and fact, as well as in revelation, is accompanied with a

vague belief, or theoretical assumption that the conservative and beautifying qualities of truth belong to it only by appointment, and depend on the arbitrary will of the Creator. In the modern schools of philosophy and metaphysics, instead of its being believed and taught that Truth makes the Creator to be what He is, holy, and upright, and just, it is believed and inculcated that the Creator makes truth to be what it is, to be the *light* of all who possess it.

The scholastic theory of truth is precisely similar to that of material substance,—that its phenomena are not produced by its own necessary tendency, or by its own efficiency, and that they are connected with the substance only incidentally, or by divine appointment;—or, that the Creator makes *power* to be what it is, instead of power being an essential part of his Being. This coincidence in the theories respecting truth, and material substance, might have suggested the thought, and have led to the inquiry whether *truth* may not be a substance, whether it may not have the same generical characteristic with matter. But it seems to be considered an indubitable fact, that truth has no *quality*, or *phenomenon*, no sensible *appearance*, or *form* by which to distinguish it from other realities; nor any characteristic in common with any other objects of knowledge, by which it may be referred to a class, or *genus*. Hence it is that truth is deemed incapable of being defined, for a logical definition *points out the genus, and the specific difference* of the thing defined. If truth belongs to no *genus*, or if it possess no characteristic in common with some other things; and if it exhibit no phenomenon by which it can be distinguished from other objects, and by which at the same time it manifests its own existence or reality, then of necessity it is undefinable. But if this were its

character, or its no character—it would be undiscoverable too, it would be impossible to know, or perceive it; for truth is not perceived immediately or in a direct manner, as phenomena, or operations are; truth is an invisible thing.

To arrive at a correct knowledge and right definition of truth, the best, and perhaps the only successful method, is that recommended by Sir Francis Bacon, that is, the investigation of *facts*. We must analyse the manner in which truth is actually perceived; and we must inquire what is, in fact, the object of the mind in the perception of truth—or what is the precise thing to which we give the general appellation of *truth*. It should be inquired whether truth has a resemblance, in any one point, to any other object, and whether it is necessarily or uniformly attended with a specific phenomenon.

If it be suggested that truth cannot be a substance,—we would ask, Why? Is it because truth does not gravitate and repel, that we must not refer it to this *genus*? Is it because it is not tangible? Gravitation and repulsion characterize the *species*, not the *genus*; they are peculiar to matter, and distinguish it from spirit and from truth—Spirit does not gravitate, and yet it is a substance; it is a substance, because it is the *efficient cause* of a phenomenon; it is *spiritual* substance, because its phenomenon is *perception*. If truth exhibit any species of phenomenon, if any effect is proper to truth only, then truth is the *efficient cause* of that phenomenon, or effect, and is a substantial, or indestructible being.

The definitions heretofore offered of truth have generally given a partial view of that object. Writers paint that aspect of truth with which they happen to be most familiar; or they describe the peculiarities of the *class*

of truths which their particular pursuits have led them to investigate. But a regular definition should point out the characteristic which is common to all classes of truth, and which at the same time distinguishes truth from every other species of the same *genus*, that is, from every other *substance*, this is to point out the “specific difference;” and it should point out the *genus*, or the characteristic which it has in common with some other objects of knowledge—that is, with other substances.

“Truth,” says Mr. Wollaston, “is the conformity of those words or signs by which things are expressed, to the things themselves.”

“Truth,” says Dr. Tatham, “is of the nature and essence of God; like Him *incomprehensible* in the whole, and *ineffable* in its sublimer parts. For these and other reasons it cannot admit of an *adequate definition*.—God is Mind,” continues the Doctor, “and truth is consequently an attribute of mind.”

“I account that to be *truth*,” says Dr. Beattie, “which the constitution of our nature determines us to believe; and that to be *falsehood* which the constitution of our nature determines us to disbelieve.”

None of these definitions are *logically regular*; it is probable the authors did not intend them for such. We should indeed except that by Dr. Tatham, for though he professes to believe that truth “cannot admit of an adequate definition,” yet the latter part of the above extract:—“Truth is an attribute of mind,” is a definition in the very form prescribed by the father of dialectic. “Attribute” is the *genus*; “of mind,” the specific difference. But though this definition is logically regular, it is not philosophical; it does not distinguish *truth*, from *power*, for this sect of philosophers define

power in the same words, *Power is an attribute of mind*. Now *truth*, and *power* are essentially different from each other, and they cannot both be properly defined by saying they are *attributes of mind*. But if the word *attribute* mean a phenomenon, or operation, then neither truth nor power are *attributes*, they are not phenomena. Truth has no necessary relation to mind; if it had, the brutes would possess it, there would be no irrational minds, none incapable of moral perception. But the knowledge of truth involves the exercise of reason; hence, mind may exist without truth, and truth certainly exists independently of mind.

Truth is the efficient cause of harmony. Truth is a *substance*, a self-existent, indestructible being; and like other substances it is distinguished by, and perceived through a specific phenomenon.

Dr. Wollaston took his idea of truth from one class of truths, the *truth of words*, or historical truth; and his definition is formed on this particular view, or on the connexion between truth as it is in itself, and the *words* by which it is expressed. "Truth," says he, "is the *conformity* of words or signs to the things expressed." This is truth as opposed to falsehood; nothing but words, or artificial signs can be falsified. But truth exists independently of words, and is to be distinguished from other things, as well as from falsehood; and we shall find, that the characteristic by which truth is distinguished from other species of the same *genus*, that is, from other substances, is also the only infallible criterion by which to distinguish truth from falsehood and error. *Harmony* is the characteristic of truth, and constitutes demonstrative evidence.

But this class of truths, the truth of "words," would be more accurately defined by saying, that it is the

conformity of *propositions* to the *relations* of things as they really exist. Single *words* express "things," but single words do not express *truths*. The word *power* expresses a certain object of knowledge, but it expresses neither truth nor falsehood. It is only when words affirm, or deny some *relation* of things, that they are either true or false. Every proposition affirms some relation of things; and a proposition is true, when it expresses the real, and none but the real relations of things, the relations as to time, place, action, cause, effect, &c. When we say *power produces motion*, we affirm a specific relation, the relation of *cause and effect*, between power and motion. The truth affirmed, or "*expressed*" in this proposition, is that *relation of cause and effect*, between power and motion; but the truth of the proposition, is its *relation of conformity* to that relation of cause and effect as it really is. The truth of the proposition, and the truth expressed by the proposition, are different truths; the last, viz. that power produces motion, is a necessary eternal truth; but the first, the *conformity* of the proposition to the eternal relation, is an incidental truth; as words are only the conventional and arbitrary signs of things, they can have no natural or necessary conformity to the things they express. Hence words, and even propositions may have a "conformity" to *things*, and yet be false; if this were not so, there could be no such thing as falsehood. I may say, *matter perceives*. The words of this proposition have a conformity to the *things* they express, and to the relation also which they *express*; they affirm the relation of cause and effect, or of agent and operation, between matter and perception. But though matter, and perception are both real objects, no such *relation* subsists between them, therefore the

proposition is false. Words have always a conformity, an artificial conformity, to the things they express; otherwise they would not be the *signs* of those things; but they sometimes affirm *relations* which do not exist, or which do not belong to the things of which they are affirmed; and it is then they are false.

Dr. Beattie's remarks apply, almost exclusively, to general and necessary truths; for it is only this class of truths of which it may in some sense be said, that "the constitution of our nature determines us to believe" them; that is, when the evidence of a truth is presented to a mind unbiassed, and capable of appreciating, or of perceiving the nature of evidence, that mind necessarily believes, or *perceives* the truth. But the mind in its best state, is not determined by its constitution alone, and independently of evidence, to the belief, or perception of any specific truth; if it were, it should have that perception, or a knowledge of that truth, from the earliest moment of its existence. As soon as mind exists, it *perceives*; "the constitution of its nature" absolutely determines it to perception, but not to the perception of truth, or of any particular object. The perception of a particular object depends on external circumstances, as well as on the constitution of the mind. Every truth is a *relation* of some two things; and when the mind has a knowledge of those things, and perceives some necessary relation arising from the nature of the things, then it perceives a necessary *truth*.

But the Doctor's remarks are not universally true even of general or necessary truths. The "constitution of our nature" is not so infallible, as uniformly, or necessarily to exclude the belief of falsehood; hence, *belief* is not the criterion of truth, nor disbelief, of falsehood. The Doctor's definition of truth seems to imply,

that the constitution of the mind is such, that it will necessarily believe truth, and reject falsehood. But if this were true, the circumstance would characterize, not the truth, but the mind; it would characterize the mind, which perceives, not the object perceived. Perception is the operation of mind, and the perception of truth characterizes the *rational mind*; but *to be perceived* does not characterize any thing, does not distinguish one thing from another. Besides, it is a notorious fact that we are often deceived, that we often mistake falsehood for self-evident necessary truth. This arises, not from the want of an infallible criterion of truth, but from the fallibility of the human mind.—Considering the difficulty which arises in many cases, in ascertaining the truth, the single circumstance, that we *believe* a proposition, is not a sufficient test of its truth.

The perception, or belief of truth, is characteristic of the mind, rather than of truth; that is, it distinguishes the rational mind from the irrational. Although the perception of truth do not arise from the constitution of the mind necessarily, nor even from that of the rational mind, independently of evidence, yet the perception of truth constitutes rationality; when the two causes meet, when *evidence*, the existing cause, is presented to the rational mind, the efficient cause, the effect, the *perception of truth* necessarily follows. And though there are other invisible objects beside truth, the knowledge of which are acquired through the medium of evidence, the perception of any object through the medium of evidence, involves the perception of truth, or of some *necessary relation*. Every logical deduction, implies the perception of a necessary relation between the conclusion and the premises.

It is a singular anomaly in philosophy, to represent the *perception of truth* as characterizing truth, and at the same time as arising necessarily from the "constitution of our nature;" or from the constitution of the mind. Dr. Beattie is not singular in this. The perception of truth is a complex phenomenon, it does not arise, singly, either from the constitution of the mind, nor from the nature of truth; and therefore is not the distinguishing characteristic of either. *Perception* is the characteristic of Mind, or of Spirit,—*harmony* is that of Truth.—Truth exists independently of the mind, and of being perceived; therefore, the *perception of truth* does not characterize truth; and the human mind exists long before it is capable of perceiving the nature of truth and evidence, therefore the perception of truth does not arise necessarily from the constitution of the mind. Before the mind can perceive necessary truth, it must be capable of appreciating evidence.

That *belief* does not characterize truth is demonstrated by the fact, that there are other invisible objects of knowledge, which are essentially different from truth, but which produce in the mind as firm a conviction of their reality as truth can do. Hence truth is to be distinguished, and it is in fact distinguished, not from falsehood only, which should be disbelieved, but also from other real objects of *belief*. Power, or material substance presents itself to the mind by an evidence, or a criterion as infallible as that of truth, and obtains as firm a belief in its reality; yet that belief does not characterize power, because there are other objects, different from power, which produce belief. The distinguishing characteristic of power, is *motion*, its own peculiar phenomenon; motion is the immediate effect, or the operation, of power; *belief* is the remote effect, produced in

the mind by the operation upon the external organs of sense. Belief therefore is an incidental, and not a necessary effect of the existence of power.—And the distinguishing characteristic of truth is its own peculiar phenomenon, that is, *harmony*; the belief, or perception of truth is the remote effect, of which, harmony is the exciting, or secondary cause. Mind is the efficient cause of perception, but Truth is the efficient cause of harmony.

Dr. Tatham seems to have had in his mind's eye, truth as it is distinguished from other real beings, or *substances*. He says, "Truth is of the Essence of God;" that is to say, truth is of the Substance, or Being of God. He seems to have had a vision of truth in her genuine form; but he has had also some theoretical notions, which threw an obscurity over the object of his contemplation, and infused themselves into his definition. The truth seems to have forced itself upon his mind, in despite of a theory which he held in opposition to it; for he tells us that "Truth is of the *Essence of God*;" but again he says, "Truth is an *attribute*." He refers truth first to the *genus substance*, or *essence*; and again he refers it to the *genus attribute*, or *quality*. Now an *essence*, and an *attribute* are distinct things; substance, and quality are different *genera*. Although truth belongs essentially to God, it is certainly incorrect language to say that truth is an *attribute* of God. Truth is the *basis* of certain attributes of God, of justice, holiness, beauty; these are attributes of God; but they are attributes of a God of truth; a God without truth would not be holy, or just, would have no beauty in His character, any more than a God without *power* would be sublime and awful, an object of admiration and of fear.

Truth is the efficient cause of harmony—or of beauty, which is harmony, or proportion of form, or of parts. Harmony is a simple phenomenon different from either motion, or perception, and requires a distinct efficient cause. Truth is the only cause which is adequate to the production of harmony; neither power, nor spirit, unconnected with truth, produces this phenomenon. The operation of power is *motion*; that of spirit, *perception*; *harmony* is an operation distinct from either, and requires a distinct efficient cause. In fact the human mind, wherever it is capable of reasoning, or of the exercise of common sense, assigns a distinct efficient cause to this phenomenon. Wherever harmony, or beauty is exhibited to the senses, or to the mind, it is referred to *truth* as its ultimate cause, or that which is necessarily at the foundation of the phenomenon.—Harmony indeed never exhibits itself to the senses but in connexion with the phenomena of power; the writing of a proposition, and the sound of the words which convey a truth, are operations of mechanical power; but no one confounds the *truth* of a proposition with the sound of the words, or with the written characters. Yet though common sense distinguishes practically the sound from the sense, when philosophy comes to investigate the distinctive character of truth, she is apt to confound that character with its adjuncts; she invariably brings along with her some *dogma* which she throws over truth, and then judges of her character through this false medium.—In music, harmony is connected with sound, but the harmony is a phenomenon distinct from the sound; the efficient cause, or principle of the sound, is mechanical power; but the principle of the harmony, or the first principles of music, are certain immutable *rules*, or *truths*. No one ever thinks of ascribing music

to power as its sole, or as its efficient cause; when the foundation, or first principles of music is sought for, it is sought among the *truths*. We practically recognize the necessary relation of *truth* and *harmony*, both in common life, and in the sciences; the harmony of a truth which is sought, with a truth already known, is the evidence, or the test of the genuineness of the former. Truth is always consistent with truth, or in *harmony* with truth.

Truth is the foundation of *beauty*, or of harmony of parts in form, or figure; such as beauty of architecture, beauty of person, &c. Architecture is an art founded on certain principles, or *truths*, and never could be brought to any degree of perfection independently of those principles; neither is personal beauty produced by its divine author at random, or without *truth* and *science*. "The Lord possessed me in the beginning of his way, before his works of old. When he prepared the heavens I was there."—Truth is the foundation of moral beauty; it is the basis of honour, integrity, justice, &c.

Harmony constitutes demonstrative evidence, or it is the criterion of mathematical and metaphysical truth. Every demonstration in geometry proceeds upon the harmony, or agreement of the *proposition*, with the definition, or diagram to which the proposition relates. Thus, if it is to be demonstrated that the three angles of a triangle are equal to two right angles; the mathematician proceeds to analyse the two angles and the three angles, and when it is found that from their nature they necessarily *harmonize* with what is affirmed in the proposition, then the proposition is demonstrated to be a universal truth. The *axioms* are established on the same species of evidence, their *harmony* with the

definitions. *Two straight lines cannot intersect each other in more points than one.* This truth is said to be perceived *intuitively*, or without reasoning and without evidence. But this is not the fact. This negative principle may be resolved into the positive fact, that when two straight lines intersect each other, *the farther they are produced the farther they diverge.* This general fact is immediately founded in the definition—*A straight line is the shortest that can be drawn between two points.* Every negative principle, if genuine, is founded in some positive principle, which is ultimately founded in the definition, or predicament of the thing to which the principle relates. And it is the *harmony* of the *axiom* with the definition, or predicament of the thing to which the *axiom* relates, that is the evidence of the truth of the latter, and establishes it beyond contradiction.

It is the same in metaphysics. Definition. Matter is the efficient cause of gravitation. Hence the *axiom*—*Gravitation is a universal law of matter*, or, matter gravitates uniformly, and nothing but matter gravitates. This axiom has no other foundation than in that definition, or in the *nature* of material substance; and it evidently implies, and is implied in that definition, that matter is the efficient cause of gravitation. If matter is the efficient cause of gravitation, and if like causes produce like effects, then gravitation is a universal law of matter: but if matter is not the efficient cause of gravitation, and if it is not a universal truth, that like causes produce like effects, then the *axiom* that matter gravitates uniformly, or at all times and all places and circumstances, is a groundless assumption. But the *definition* is in fact recognized in the *axiom*; and it is the perfect *harmony* of the *axiom*, with the definition;

or with the known and tacitly recognized *predicament* of matter, that demonstrates the genuineness of the axiom. In any syllogism, it is the *harmony* of the conclusion, with the premises, that constitutes the *evidence*, or proves the truth of the conclusion. Every invisible object of knowledge manifests itself to the mind through the evidence of some phenomenon, or of an operation which is immediately perceived; gravitation is the evidence of the existence of matter, or of power; perception is the evidence of the existence of spirit; and harmony is the evidence of the reality of truth.

But it may be asked, If harmony is the infallible criterion of truth, and is generally recognized as such, how do we ever come to be deceived? If harmony is necessarily connected with truth, and if it uniformly excite the belief, or perception of truth, what is it that excites the *belief* of that which is false? How is it that we sometimes imagine that we perceive a truth, when no truth, but a falsehood is presented to the mind?—This anomaly does not arise from the nature of truth, nor from the nature of demonstrative evidence; but from the imperfection of human knowledge; it does not arise from the want of an infallible criterion of truth, but from the fallibility of the human mind. Without entering into any elaborate discussion of the causes and consequences of this imperfection, we will simply state a few facts. Although harmony uniformly attends truth, and uniformly produces the perception of truth in the reasoning mind, yet the mind, as well as the ear, is sometimes deceived by an imperfect harmony;—or, though truth must harmonize with truth, so falsehood *may* harmonize with falsehood, while from the limitedness of our knowledge, we may not be possessed of the fundamental *truths* with which those falsehoods do *not*

harmonize, and which would prove their fallacy. Hence, a superficial knowledge of a subject, sometimes leads to greater absurdities than perfect ignorance; and hence the necessity for ascending to first principles when any difficulty is to be solved.

Every real truth will be found in harmony, and falsehood will be discordant, with the true definition of the thing to which they relate, or of which they are affirmed. An instance of this has been given in the chapter on material substance. That "Power cannot be without a subject," is a principle very similar to the axiom, two straight lines cannot intersect each other in more points than one. That is, these principles are similar in a logical point of view, or considered as principles of reasoning; they differ in the subjects they relate to, the one relating to the nature of power, the other to the nature of a straight line. They are both *axioms*; and they are both negatives; and each is resolvable into the *definition* of the thing to which it relates. They both appear intuitively certain, or they appear certain from their *harmony* with the definitions to which they respectively relate. Harmony is *intuitive evidence*. That two straight lines cannot intersect each other in more points than one, is a genuine truth, because it is founded in, or harmonizes with the true definition of a *straight line*. But the metaphysical *axiom* is false, because it is founded in a false definition of *power*. The *axiom*, power cannot be without a subject, takes for granted that power is an *attribute*, a *quality*, or the *operation* of a cause. It supposes that power is connected with spirit in the relation of cause and effect; it supposes power to have the same relation to spirit, that perception has to spirit, or the same that motion has to power. But all this is false and absurd; power is,

not the operation of a cause; but the efficient cause of an operation. So that instead of real and perfect harmony, this *axiom*, power cannot be without a subject, has produced confusion and "harsh discord" in metaphysical science. But when it is brought to the touchstone of genuine fact, it betrays its unsubstantiality, it vanishes like the shadows of the night at the approach of the morning.

Thus mathematics and metaphysics proceed upon the principle that *harmony* is the characteristic of truth. Prophets and poets recognize the same principle. Truth and harmony, or beauty, are associated in their writings, in a way that plainly indicates a conviction in the minds of the writers, that those two things are necessarily connected.

The prophets and apostles claim the first notice. The song of Solomon contains a variety of rapturous expressions of the *beauty* of the church and its King, of both which *truth* is the foundation and distinguishing characteristic. Many of those expressions are highly figurative; but some of them are plain, and the sense incontrovertible.—"Thou art *beautiful*, O my love, as *Tirza*; *comely* as *Jerusalem*."—"Behold, thou art *fair*, my love; behold, thou art *fair*."—"Thou art all *fair*, my love; there is no spot in thee."—"My beloved is white and ruddy, the chief among ten thousand,—yea, he is altogether *lovely*."—King David who is a prophet and a poet says, "Thou art *fairer* than the children of men, grace is poured into thy lips." St. Paul associates truth, with beauty thus: "Whatsoever things are *true*, whatsoever things are *honest*, just, pure, whatsoever things are *lovely*," or *beautiful*, and "of good report."

The works of poets furnish the most ample testimony in favor of the connexion between Truth and Harmony.

"Goddess of the lyre,
 "Which rules the accents of the moving spheres,
 "Wilt thou, eternal *Harmony* descend
 "And join this festive train? for with thee comes
 "The guide, the guardian of their lovely sports,
 "Majestic *Truth*;"*

"Thus was *beauty* sent from heaven,
 "The lovely mistress of *Truth* and good
 "In this dark world; for *Truth* and good are one.
 "And *beauty* dwells in them, and they in her,
 "With like participation."*

"Alas! how faint,
 "How slow the dawn, of *beauty* and of *truth*
 "Breaks the reluctant shades of gothic night
 "Which yet involve the nations!"*

"Blest be the day I 'scaped the wrangling crew,
 "Of Phyro's maze, — — — —
 "And held high converse with the god-like few,
 "Who to th' enraptur'd heart, and ear, and eye,
 "Teach *beauty*, *virtue*, *truth*, and love, and melody."

†

In these stanzas the connexion of truth with beauty, or with harmony, is affirmed in direct terms; and there are innumerable instances in the works of the poets, in which this connection is implied. We will notice a few.

"Is there a heart which *music* cannot melt?
 "Alas! how is that rugged heart forlorn!"

"He needs not woo the Muse, he is her scorn,
 "*The sophists rope of cobweb he shall twine*;
 "Mope ov'r the schoolman's peevish page, and mourn."‡

"—Song is but the eloquence of Truth."§

* Akenside. † Beattie's Minstrel. ‡ Minstrel. § Campbell.

"The only amaranthine flow'r on earth
 "Is *virtue*,* the only lasting treasure truth."†

"Where now that — — gloom which hid
 "Fair *Truth* from vulgar ken.—‡

The epithets *fair*, *lovely*, *beautiful*, and *sweet*, are applied to truth, but never to power, nor to spirit. Power is *sublime*; spirit, or mind is *interesting*, or is the object of *benevolence*; but truth is *fair*, *beautiful*, or *lovely*.

Truth is a *substance*, a being, or thing which has a permanent existence, and is the *basis* of a specific phenomenon. In many minds the general term *substance* is associated with the idea of a particular species; that is, with the idea of material substance. To these minds the general term conveys no general meaning; it conveys only the ideas of gravitation and repulsion, or of solid ponderous being;—they can hardly conceive of substance that is not tangible. Yet we have the same kind of evidence for the existence and substantiality of truth, that we have for the existence and substantiality of matter, or of spirit; truth, like these other things, is the subject of a quality, or the basis of a phenomenon. A specific phenomenon is acknowledged both by the senses and by the mind; reason, or common sense assigns to this phenomenon a specific efficient cause, or invisible *basis*; and that basis we denominate *truth*. But as in the perception of gravitation and of matter, we are apt to confound the *perception of the phenomenon*, with the *perception of the substance*; so it is with respect to truth and harmony, we are apt to confound the perception of harmony, with the perception of truth.

* *Virtue*, moral beauty. † Cowper. ‡ More.

But truth is too shadowy a thing to be conceived of as a substance; we cannot handle it with our hands, or shape it into form, figure. Very right; truth is a subborn thing; it will give an impression, but receive none. Is it then more shadowy than spirit, which receives, but does not give impressions? Would not power, or matter appear as shadowy, if we were in the habit of withdrawing the senses from the observation of its phenomena?

But it is hard to conceive of truth as exercising an efficiency, as being an operative cause. It is true, we cannot conceive *why* truth operates, or why it produces harmony, but we do conceive the fact, we know that harmony is the offspring and evidence of truth. But this does not satisfy us, our metaphysical predilections demand something more; we are not content with the knowledge of an efficient, unless we can also discover a *final* cause, a reason for every phenomenon. There is a rooted prejudice in the mind which supposes, that every operation, whether simple or complex, is, in some way or other, the effect of volition; that mind, or spirit is the only ultimate efficient cause in existence, and power, and truth are secondary causes, or attributes, (*qualities.*)

But we cannot tell why truth *harmonizes*, any more than we can tell why matter *gravitates*.—We shall hereafter consider of the reason why, or the manner in which truth affects the external organs of sense; it will be shewn, that truth affects the senses by means of its harmony, or its sweetness; but this is a different thing from giving a reason why, or accounting for the fact, that truth produces harmony. We can give the *causes* of gravitation and of harmony, but we can give no *reason* why the one cause produces gravitation, or why the

other produces harmony. These are *ultimate facts*; they cannot be accounted for, otherwise than by attributing the phenomena to their respective ultimate causes. Gravitation and harmony are not voluntary operations, considering each with respect to its proper efficient cause; power contracts, or matter gravitates—necessarily, not voluntarily; and truth harmonizes, not voluntarily, but necessarily. Harmony, or beauty is the *idea*, the *image*, or visible *form* of the invisible substance called *truth*.

Though it may be thought difficult to comprehend, or extravagant to affirm a universal and necessary relation between truth, and harmony, there is nevertheless a vague belief of the fact universal among mankind. And it is not so much the fact, as it is the ground, or evidence of the necessity and universality of the fact, that we sometimes puzzle ourselves about. Some are of opinion that demonstration belongs exclusively to the mathematical sciences; yet there is nothing more common than to talk of demonstration, and to effect it too, in moral and natural philosophy.

But there is much greater diversity of opinion about what it is that constitutes demonstrative evidence, or what is the criterion of truth. In the philosophy of matter and spirit, we proceed by investigating facts; and we judge of the nature or character of these invisible objects, by their phenomena. Their phenomena constitute their character. And in the philosophy of truth, is it not proper to proceed in a similar manner? This, too, is confessedly an *invisible* object of knowledge; and the way to arrive at a philosophical definition of this object, is to investigate the facts relating to it, the manner in which the mind acquires a knowledge of it, or to inquire what is the *form*, the *dress*, the *visible*

operation, or the *phenomenon* through, or in which this invisible object presents itself to the mind.

All are agreed that there is such a thing as demonstrative evidence, or an appropriate medium, a *species* of evidence which renders the truth perfectly certain. The question is, what is, precisely, that species of evidence? Some seem to suppose, that in any act of reasoning, the premises is the *evidence* of the truth of the conclusion, or that one truth is evidence of another. But how is the truth of the premises perceived? It is an invisible object as well as the truth of the conclusion. To say that one truth is *evidence* of another truth, or that one truth causes another to be perceived, is just about as correct as to say, that one *body* causes another to move, when it is well known, that it is not the one body at rest, or simply, because it is body, that causes the other to move, but that it is the one body *in motion* that impels, or causes the other to move. So it is with truth; the one truth does not cause the other to be perceived, or to manifest itself to the mind, but it is the phenomenon, it is the *harmony* of the truth of the conclusion, with the truth of the premises, that demonstrates the former. *Evidence* in its very nature is something perceived immediately; but truth is not perceived immediately; it is therefore not one truth that demonstrates another truth, or causes it to be perceived; any more than a body at rest, makes an impression upon another body, or causes it to move; but it is the phenomenon, the harmony of truth with truth, that demonstrates its reality.

The simple fact, that harmony is connected with truth, is discovered in the first place by observation, or in the same way that we discover that gravitation is connected with matter; but the ground of the univer-

sality of that connexion, or of that fact, is to be found only in the nature of the things themselves. In an analysis of the natures of truth, and harmony, we find that the one is an effect, of which the other is the efficient cause, or is that, without which the effect cannot be produced; hence they are universally connected. The unsophisticated mind goes directly to this result; common sense, in the pursuit of truth, takes for granted her necessary connexion with *harmony*, and whatever is found in this garb, is received as truth. But when the philosopher comes to define truth, he thinks it necessary to assign her some metaphysical character, or some invisible dress; and thus places her out of sight altogether, and beyond the reach of inquiry.

It is hard to conceive of *power* as being the efficient cause of certain phenomena of matter, because these phenomena are sometimes associated with the phenomena of mind; and because of the long cherished belief that power is an *attribute* of mind, and that all the phenomena of matter some way or other depend on mind. And for a similar reason it is hard to conceive of *truth* as being the efficient cause of harmony; it is because harmony is associated with the phenomena of both matter and spirit. Because harmony of sound is produced under the direction of mind, there is a vague belief that mind, or spirit is the ultimate cause of harmony in general, and of *truth* also. But the mind that *hath music in itself* must have been previously possessed of truth; it must have acquired, in an analysis of the phenomena, those mathematical principles of quantity and number, which constitute the first principles of music. Even a child who performs a regular tune, must in some measure comprehend these principles, and must in some sort have performed this analysis; else

how should he make his quantities and numbers conform to the rules of harmony.

Beauty of architecture consists in the *harmony*, or right proportion of parts, and this we are wont to ascribe to the *mind* of the architect, as the ultimate cause of the phenomenon, the *beauty*; and it is just to do so; but it is to a mind informed, or possessed of the first *truths*, or *rules* of the art. A mind uninformed of those first truths, has no capacity to create beauty; as soon should we expect impulse where there is no power, as beauty, or harmony where there is no truth. Truth is essential to all the arts, as much so to painting, and to poetry, as to music or to architecture.

Truth is not an attribute of mind, nor is it essential to the existence of mind; yet truth is undoubtedly a constituent element of every reasoning mind; for reason is employed only in the acquisition of truth, or in discovering the *relations* of things. The spiritual substance is also a constituent element of the substance of the mind; it is a distinct thing from truth, and exists without it; as truth may, and does exist independently of spirit. It will not be denied that truth is independent of mind. That two and two are equal to four, is a truth though it be not perceived. Truth is not an attribute, or *operation* of the mind; it is not an operation at all. It is only by confounding the *perception* of truth, with truth itself, that we come to call the latter an attribute of mind. *Perception* is the attribute of mind; truth is the *subject* of the attribute of *harmony*.

If truth is not the efficient cause of harmony, there is no adequate cause of this phenomenon, that has been discovered; or, contrary to the habitual proceeding of reason, she has not assigned a specific ultimate cause, to this specific phenomenon. If truth were not that

cause, or were not recognized as such, we should then have a phenomenon, or quality, without a substance, or basis,—an operation, without an adequate cause; we should have truth, a thing independent in its nature, and eternally existent, yet producing no effect in nature, sustaining no part in the universe of being. We should have a being, or thing invisible in itself, and exhibiting no visible operation, no evidence of its existence, and yet perceived by the mind; perceived neither mediately, nor immediately, yet perceived. We should have a cause without an effect, and an effect without a cause; or rather, an effect and its cause disjointed—unconnected.

Truth is but a name, if it be not an efficient cause. We have no powers, or organs, of perception, excepting those of sense and consciousness, and that of reasoning. Sense and consciousness perceive effects, operations; reason perceives causes; reason *infers* the existence of efficient causes, from the operations perceived by sense and consciousness. If truth is neither cause nor effect—substance nor phenomenon—it has no existence.

Truth is a self-existent efficient cause, and its mode of operation is harmony. Its more remote effect is to *please*, and to *govern* mind; the former, that is harmony, is the effect which truth produces in itself, it is involved in its nature; the latter, that is, to please and to govern, are the effects it produces in other beings, or substances, beside itself; the former is a necessary effect, the latter is incidental.—Power moves, or impels by means of its primary operation, *contraction*; spirit perceives in *expansion*; and truth governs, or influences the mind by means of its *harmony*. The mind governed by power, or force, is a slave; ungoverned, or

governed by passion, is a demon; governed by truth, is divine.

In a treatise on truth it would be unpardonable not to notice the doctrine of Professor Stewart, respecting the nature of truth and evidence. The Professor's remarks are rather vague and general, and somewhat desultory. The most condensed and determinate form in which his theory of truth is to be found, is in the second volume of "*Elements of Philosophy*," and in chapter first, entitled "*Of the fundamental Laws of human Belief, or primary Elements of human Reason*," and is contained in the following paragraphs.

"I begin," says the Professor, "with a review of "some of those primary *truths*, a conviction of which is "necessarily implied in all our thoughts and in all our "actions; and which seem, on that account, rather to "form constituent and essential *elements* of reason, than "*objects* with which reason is conversant."

The primary truths to which I mean to confine my attention at present are: 1. Mathematical Axioms; 2. Truths (or more properly speaking, Laws of Belief,) inseparably connected with the exercise of consciousness, perception, memory, and reasoning.*

The following passage contains a few specimens of the "*Laws of Belief*" with the author's own observations concerning them.

From such propositions as these, "*I exist; I am the "same person to-day that I was yesterday; the material "world has an existence independent of my mind; the "general laws of nature will continue, in future, to "operate uniformly as in time past, no inference can "be deduced, any more than from the intuitive truths*

* *Elements of Philosophy*, p. 25. 2d Vol. New York ed.

“prefixed to the elements of Euclid. Abstracted from
 “other *data*, they are perfectly barren in themselves;
 “nor can any possible combination of them help the
 “mind forward, one single step in its progress. It is
 “for this reason, that instead of calling them, with
 “other writers, *first principles*, I have distinguished
 “them by the title of *fundamental laws of belief*; the
 “former word seeming to denote, according to common
 “usage, some *fact*, or some *supposition*, from which a
 “series of consequences may be deduced.”*

In the chapter throughout from which these paragraphs are extracted, the author’s design is to prove, that the “laws of belief,” or the “primary truths” of philosophy, are neither the result of reasoning, nor a foundation for reasoning, that they are not discovered, as facts are, in an investigation of the phenomena, and that unlike facts, they afford no *data* from which a conclusion can be drawn.—He labors to prove that truths are perceived *intuitively*, or independently of reasoning and of evidence. He seems to consider the knowledge of truth as *innate*; for he says it “seems rather to be “a constituent *element* of reason, than an *object* with “which reason is conversant.” And he contends farther, that first truths, or “elements of reason,” are *not principles* of reasoning, that “abstracted from other “*data*, they are perfectly barren in themselves, nor can “they help the mind forward one single step in its progress.”—In the *first section* the author labors to prove, that the *principles* of mathematical science “are, not the “*axioms*, but the *definitions*.”—The *second section* is intended to shew, that the “laws of belief” are precisely analogous to mathematical axioms in this respect, that from them no inference can be deduced.

If it be true, that the perception, or belief of truth, is not the result of reasoning, then that belief is not a rational, or philosophical belief;—and it is not then necessary to be endowed with reason, to comprehend, or perceive truth, for rationality is not requisite to the perception of that which is perceived without reasoning.—And if it be true that first truths are not a foundation for reasoning, then truth has no efficiency, and no influence over mind; it is not a guide in the pursuit of knowledge, nor in distinguishing between right and wrong; it is not, either in science or in morals, “a lamp to our feet, and a light to our path.” If fundamental truths have so little character, and so little authority, other truths cannot have more. But if indeed first truths do not “help the mind forward one single step,” what is the value of truth? What is its use? If truth is without efficiency and without influence or operation, it would seem to be about as useless a thing as matter would be if made of nothing. But if first truths, or “fundamental laws of belief,” are not *principles* of reasoning, in what sense are they *fundamental*?

The Professor's theory of the *perception of truth* is a refinement on Dr. Beattie's *definition* of truth. “I account that to be truth,” says the Doctor, “which the constitution of our nature determines us to believe.” The Professor says, “primary truths—seem rather to be constituent and essential *elements* of reason, than *objects* with which reason is conversant.”—There are certain propositions which the Professor instances as “truths, or fundamental laws of belief;” such as that “the material world has an existence independent of my mind;—I am the same to-day, that I was yesterday;” &c. But it is sometimes the *belief* of one of those propositions, that he speaks of as being a “law of

“belief.” “The belief,” says he, “which all men entertain of the existence of the material world, belongs to the same class of ultimate or elemental laws of thought.”*—Thus according to the Professor, that *matter exists*, is a “law of belief,” and that *matter is perceived*, is a “law of belief;”—or in other words, the *existence of matter*, is a “law of belief,” and the *belief* in the existence of matter, is a “law of belief,” and “laws of belief” are “truths” analogous to mathematical axioms.† In this way the author has woven a web, which catches many a fly. His idea of truth has evidently been obscured, by being blended, in his mind, with the idea of the perception, or belief of truth.

The Professor’s grand aim is to establish a system of logic, or to point out the most proper method of investigation and reasoning in philosophy and metaphysics. To this end he is laboring to shew what is the characteristic of *truth*; or rather, he labors to prove that truth has no criterion, no decided characteristic,—excepting the circumstance that it is *believed*. Accordingly he says, that truths are “more properly” termed “laws of belief;” by which term he seems to signify, that every truth is a *law* of the mind, in the same sense that perception is a *law* of the mind, or that gravitation is a *law* of matter,—for he says, “truths seem rather to “be *elements* of reason, than *objects* with which reason “is conversant.” In giving this title—“laws of belief,” to truths, the author seems not to have distinguished between the *perception*, or *belief* of truth, and the *truth* perceived, or to have confounded truths, with the phenomena of mind; which is the same error into which

* El. Phil. Vol. 2. p. 53. † P. 52.

Dr. Tatham has fallen, when he says "*truth is an attribute of mind.*"

To make good his theory of truth and evidence, the Professor attempts to establish a *distinction*, and a *parallel*; a distinction between *principles of reasoning*, and "*elements of reasoning*," or "*fundamental laws of belief*;" and a parallel between *facts*, as first principles of philosophy, and *definitions*, as first principles of mathematical science; — a parallel also, between "*fundamental laws of belief*," and mathematical *axioms*. He observes, that "from such propositions as these, *I exist; the material world has an existence independent of my mind; &c.* no inference can be deduced, any more than from the intuitive truths prefixed to the "*Elements of Euclid.*"—He observes also, that "*Definitions hold, in mathematics, precisely the same place that is held in natural philosophy by such general facts as have now been referred to.*"* The general facts referred to are "*the gravity and elasticity of the air.*"†

It is astonishing that the Professor should have overlooked so obvious a distinction, as that between *facts*, and *definitions*. They agree, indeed, in being both principles of reasoning, but they are different kinds of principle; and they are not distinguished from *truths* and *axioms* by this character, for these also are *principles of reasoning*, as we shall see just now. The logician must use different terms in defining *facts*, from those in which he would define *definition*; and if the Professor had defined his terms, he had, without doubt, detected his own error. The character of a definition is, that it *points out the genus of some (one) thing defined, and the specific difference by which that thing is*

* El. Phil. p. 37. † Page 36.

distinguished, &c. But the character of a fact is, that it *affirms or denies some relation between some two things*. The fact of the *gravitation of the air* does not resemble, either in a logical or philosophical point, the *definition* of a right angle or of a square; nor can any definition, either in mathematics or in philosophy, have a resemblance to that or to any other *fact*. That the air gravitates—is a *fact*; it affirms a *specific relation*—the relation of cause and effect, or of agent and action—between the substance of the air, and the phenomenon, gravitation. But if we *define* gravitation, we say gravitation is a *phenomenon*; this is the *genus*—and that it is produced by *material substance*—this is the specific difference. In like manner, in mathematics, that all right angles are equal—is a fact; the proposition affirms the *relation* of equality among all right angles. But when we *define* the figure, we point out the *genus* by saying it is an *angle*, and the species, or specific difference, by saying it is a *right angle*, or an angle of ninety degrees.

But the Professor's design was to establish the doctrine, that *truths are not principles of reasoning*. Hence he tells us that, in mathematics, definitions are principles of reasoning, but that the *axioms* are not; that in philosophy, facts are principles of reasoning, but “truths, or laws of belief,” are not; and farther, that general facts *hold the same place* in philosophy, that definitions hold in mathematics; and that *truths hold no place* in either science.

We shall inquire by and by into the fact—what place is actually held in mathematics and philosophy, respectively, by definitions, and axioms, facts, and “laws of belief.” And we trust it will appear, that in philosophy, *truths*, and *general facts* hold the same place

in philosophy, that *truths* or *axioms* held in mathematics. In the mean time we shall endeavor to shew that the *facts* of philosophy are analogous, not to the definitions, but to the *axioms* of mathematics—in a word, that *truths*, and *axioms*, are *general facts*, both in mathematics and in philosophy; and farther, that those propositions which the author terms “fundamental laws of belief,” and which the author says, are not principles of reasoning, because they are neither *facts* nor *definitions*, are some of them really *facts*; and some of them express the *universality* of certain facts.

One of the “laws of belief” enumerated by the author is, that “*the material world has an existence independent of my mind.*” This is a fact. A fact or truth affirms, or denies somewhat. This one, or this “law of belief” affirms existence of the material world, and denies its dependence on “my mind.” That “*I am the same to-day that I was yesterday,*” is also a fact, it affirms the relation of sameness, or similarity, of that which *I am* to-day, to that which *I was* yesterday. This is a simple fact; the following “law of belief” is more complex; “*The general laws of nature will continue to operate uniformly, as in time past.*” This proposition merely affirms *universality* of the “general laws” of nature, or of certain facts observed in nature. That matter gravitates, is one of these facts; and when a fact, or law of nature, is perceived to be universally true, and because that universality is established in a metaphysical investigation of things, the fact is termed a *truth*; the Professor terms it a “law of belief.”

Mathematical axioms are, strictly, general facts, and are of the same nature with those just mentioned, only that they relate to different things. When it is said of two right angles, that they are *equal*, this is the

expression of an individual fact; that *all right angles are equal*, is a general, or universal fact; and because of its universality, it is termed a *truth*, or *axiom*.—If in the way of experiment it is discovered, that A is equal to B, and that C is equal to B, and that, consequently, A and C are equal, this is the discovery of a fact; but when in farther contemplating the subject, it is perceived to be necessarily and universally true, that things equal to the same thing are equal among themselves,—this is termed an *axiom*, or *truth*.

So it appears that the “laws of belief” are essentially the same with general facts, and that general, or universal facts, are metaphysical *truths*, and are analogous to mathematical axioms. We will now inquire into the fact, what place is actually held in mathematics and philosophy respectively, by *definitions*, and *axioms*, *facts*, and “laws of belief.” It is certainly true, that, as the Professor observes, no *inference* can be deduced from a *truth*, or *law of belief*, nor from mathematical *axioms*, taken singly, or “abstracted from the *data*.” But the same is true of *facts*, and the same is true of *definitions*, whether mathematical or metaphysical. From no *one* principle, either axiom, or definition, fact, or “law of belief,” can any *inductive* inference be deduced. In a process of inductive reasoning, either an *axiom*, or a general fact, or a definition—any general principle, may form the *major* proposition; but we deduce no inference without the *minor* also—either expressed, or tacitly recognized. For example, *matter gravitates*; what inference can be drawn, inductively, from this general fact? None at all. But add the *minor* proposition, *the moon is a material substance*; and directly we come to the conclusion, that *the moon gravitates*. Or if we take for the *major* proposition,

the *definition*—*matter is the efficient cause of gravitation*, no inductive inference follows from this; but add the *minor*, *the moon gravitates*, then it follows that *the moon is a material substance*. It is the same in mathematics. *Definition*. A straight line is the shortest that can be drawn between two points. “Abstract—*ed from other data*” this is barren of consequence; but add the individual *fact*, here is a line stretched from A to B, the shortest that can be drawn between the two points. It is then a straight line. The axioms likewise form *major* propositions. *Major*. Two straight lines cannot inclose a space. *Minor*. Here are two lines inclosing a space. *Inference*. They cannot both be straight lines. Take now for *major* proposition the following “law of belief.” “*The laws of nature will continue to operate uniformly, in future, as in time past.*” *Minor*. Here is a fountain of water which has ever flowed as it does now. *Inference*. It will continue to flow, in future, as in times past.

Thus it appears, that in a process of inductive reasoning, any general principle, whether *axiom*, or definition, may form the *major* proposition, and an individual fact, the *minor*; though from no single principle, whether fact, or *axiom*, or definition, does any consequence follow, inductively. Truths, then, are principles of reasoning as well as definitions; and it has been seen too, that definitions are sound principles, or real guides in the path of science, only so far as they are *true*—or as they are in *harmony* with the real predicaments of things. Definition is the polar star, but truth is the *sun* of science.

We trust it has also already been proved, or made appear, that *truths* are not perceived *intuitively*, or without evidence and the exercise of reason; but that

general principles, or universal truths, both in philosophy and in mathematics are unfolded in a metaphysical analysis of the nature of the subjects of which the truths are affirmed.

Analysis and induction are apt to be confounded, the one with the other, in the attempts of logicians to describe them, probably because that analysis is frequently succeeded by induction, and induction ought to be preceded by analysis. We *analyse* a particular fact, with a view to discover its character, or, to *induct* it into some general principle; or we analyse a phenomenon, with a view to bring it under some definition, or to refer it to some class. Analysis implies *experiment*,—even in metaphysical subjects, it is impossible to analyse without adducing, or exhibiting to the mind a particular instance of the thing to be analysed, and of the decomposition, or separation of its component parts, and of its necessary relations. This is technically termed *analysis*, and *abstraction*; while the bringing an individual *subject* under some definition, or referring a particular fact to some general fact, is termed *induction*. Thus when we analyse a particular fact, for instance, the *perception of matter*, we exhibit, or bring that particular fact before the mind, in idea; we then abstract the phenomenon—simple *perception*, from its object, or exciting cause, that is, *matter*, and view the former by itself, or in its own native character; this is *analysis*; in viewing the phenomenon thus, we perceive that it is an *operation*—a thing which is produced, and passes away, this is *induction*, this single act of referring the particular object to a class of objects, to operations, is that which is termed *induction*.—In this process we establish the definition, or the general character of the phenomenon *perception*; we discover that it belongs to the pre-

dicament of *operations*. Again, in farther analysing this particular phenomenon, *perception*, with a view to discover its source, and its necessary *relations*, we abstract its generical character, as an *operation*, from its species, or particular character, as *perception*. In contemplating the first, its character as an operation, it will be perceived, that it has no stability in itself, that as soon as it exists, it passes away, and is succeeded by another of the same, and that by another, continually; that it must therefore relate to some invisible substantial being which produces it,—it is evidently the product of some cause which is able to sustain the operation continually. Thus we discover the universal *truth*, that every phenomenon requires a cause able to produce it, or an efficient cause. By pursuing the analysis of the phenomenon *perception*, several other general principles would disclose themselves, but this will suffice for the present. Although it is performed mentally, this process is properly experimental; but it is certain that when experiment is addressed to the senses, it is most efficacious in throwing light on a subject. But this is simply because the external organs of sense are more exercised than the internal organs, or faculties of the mind, or rather, that the *mind* is more exercised on sensible, than on metaphysical subjects. It is, perhaps, for this reason, that the first principles of mathematical science, which relate to sensible objects, have long ago been fixed beyond dispute, while those of metaphysics still wander as a glimmering light in a dark and vast expanse.

It is by means of analysis, or by *experiment* on lines, angles, &c. that the elementary principles, or first *truths* of mathematics are originally discovered. In comparing two right angles, it is discovered that they are *equal*.

This is a *fact* discovered by experiment. But in farther contemplating these angles, and comparing them with others, we discover that no one right angle can be greater, or less, than any other right angle; in other words, that *all right angles are equal*. This process involves and fixes the *definition* of a right angle, at the same time that it unfolds the *axiom*; for unless the term *right angle* have a definite signification, the universality of the fact does not appear. The definition and the *axiom* are established at the same time, in the analysis of the simple fact, that two right angles are equal. The simple fact ascertained by observation is the ground, or that which leads to the discovery of the definition; and the definition, in its turn, is the ground of the *axiom*, or of the *universality* of the fact. The *axiom*—things equal to the same thing are equal to one another—is discovered and proved in the same way. In experiment it is observed, that A is equal to B, and that C is equal to B, and that A and C are also equal. This is a simple fact. But in farther considering the subject, it is discovered, that whatever is equal to B, must be equal to A, and to C, and that it cannot be otherwise. Hence the *axiom*, things equal to the same thing, are equal to one another.

It appears to be the general belief that these *axioms* are perceived *intuitively* as soon as they are announced, and without experiment or inquiry. But this is not the fact, except where we have previously made the experiment, or been conversant about lines and angles, or about the things to which the *axioms* relate. It is impossible for any one to comprehend the axiom, unless he have a pretty clear conception of the things to which it relates, or of which it is affirmed. These indeed, are

very simple processes, but they form the infant science, Hercules in his cradle.

We have now to consider the physical character, or sensible form of truth, if the expression is allowable, or the manner in which truth influences other substances, and in which it presents itself to the external organs of sense. We have seen that *harmony* is the characteristic of truth, in the metaphysical world; or that it is the *form* in which truth presents itself to the *mind*. But *harmony* exists in the physical or external world also, and is perceived by the senses. But like causes produce like effects. Therefore truth is the efficient cause of harmony, in the physical, as well as in the metaphysical world. Wherever this phenomenon is perceived to exist, and whatever are the avenues through which it exhibits itself to the mind, it is always the product of the same invisible efficient cause or substance.

Harmony is the effect and evidence of truth in the physical, as well as in the moral and metaphysical worlds. But this simple phenomenon is modified in a variety of ways, by being associated with other phenomena, from which circumstance it takes a variety of names, as *music*, *beauty*, *order*, *sweetness*, &c. It has already been suggested, in treating of material substance, that truth addresses itself to the external organs of sense in the phenomenon *harmony*, and that, beside harmony of sound, which is addressed to the ear, *beauty* is harmony addressed to the eye, and *sweetness* is the same phenomenon addressed to the organs of tasting and smelling. Harmony never exhibits itself to the senses but in connexion with other phenomena, the operations of causes different from truth. There can be no

music, without *sound*; no beauty, without bodily form; no sweetness without something solid, liquid, or aërial. But the music, the beauty, and the sweetness are phenomena quite distinct from the sound, the solidity, or the bodily form. But music it may be said, or harmony of sound, requires *mind* for its production; that though it may be admitted that music is necessarily produced according to certain *rules*, or *truths*, although mind, to produce harmony, must possess truth, yet the truth is not *able of itself* to produce this phenomenon, harmony of sound, or is not the *efficient cause* of it.

It is very certain that truth is not the efficient cause of harmony of sound, or of the complex phenomenon called music; but truth is the efficient and sole cause of simple *harmony*. Harmony of sound is a complex phenomenon; the efficient cause of *sound*, is power; but power can no more produce harmony, than truth can produce sound. Harmony of sound requires mind for its production, but simple harmony exists independently of mind, though it is not, in its simple state, perceived by the senses. Truth is always consistent, or in *harmony* with itself. The *harmony* of truth with truth, depends on nothing but truth itself. Though the direction of mind is required to combine harmony with sound, simple harmony is the offspring of simple truth.

When harmony is perceived by the organ of hearing, it is necessarily combined with sound; but harmony is also perceived by the organ of taste, and then it is combined with the phenomena of bodies, in the complex form of *sweetness*. Can this be so? Can we taste truth, or smell it? Why not? If the substance of harmony cannot be tasted, what *substance*, or what *efficient cause* can? Can *power* be tasted, or matter? Power is the efficient cause of a phenomenon which, when pro-

duced on the organ of taste, excites the *sensation of acidity*; another phenomenon produced on the organ of taste excites the *sensation of sweetness*; and this too must have its *efficient cause*. But it is hard to conceive this to be the same thing that metaphysicians call *truth*. Why? Have we not *truth* in the productions of human art? Is not truth essential to a fine picture, or a fine piece of music? and are the productions of the divine artist less true, and less divine than those of the human artist? Human art produces music,—divine art produces sweetness, or that combination of substance, the operation of which is termed sweetness. Undoubtedly there is some mystery in these things; we can understand but a part of the ways of the great architect who builds, and adorns, and amply stores this world of ours. But we are permitted to see, and all the world of mankind do perceive, the several distinct elementary efficient causes of the phenomena which present themselves to the organs of sense. Sweetness is doubtless the product of a combination of the efficient cause of harmony, with another substance as a vehicle. The divine artist certainly forms these combinations in nature with the design of exciting the pleasing sensation of sweetness; but is this more incredible than that the human artist should create *harmony* of sound. The divine mind does not work without rule, or without regard to *truth*: He forms those combinations according to the eternal rules of harmony. ‘The Lord possessed me in the beginning of His way, “before his works of old.”’

We have already hazarded the opinion, that material substance, or *hydrogene* is the efficient cause of contraction, and that contraction is the object and exciting cause of the sensation, called the *sensation of acidity*; also, that spiritual substance is the same with *caloric*, and is

the basis of the phenomenon called *pungency*, or *warmth*, when addressed to the organ of taste. Neither of these simple substances then is the basis of sweetness. We are not sufficiently versed in chemistry to be able to discuss this subject with perfect success, or to identify with certainty the basis of sweetness in the laboratory, but may hazard an expression of the belief that the *base of the alkalies* is the basis of sweetness.—The alkalies are sweet to the taste; they are the purifiers of the external world, diluted with water they take away the foulness of the skin and the cloathing; they oppose decomposition, or putrefaction in animal matter; they oppose the acetous fermentation in liquids; and they neutralize the acids, forming with them a variety of chrystalline compounds. The base of the alkalies is probably the cause of that regular *harmonious* disposition of particles, called chrystalization. Metals and minerals, beside the chrystalline form of their particles, exhibit other evidence that they contain this base. They have the property of neutralizing the acids, and of forming compound salts, having a general resemblance to those formed by the alkalies with the acids. The same effect requires the same cause, the metals, and all substances forming salts with acids must contain the base of the alkalies, or the basis of sweetness.

If the alkalies oppose decomposition in animal matter, they are doubtless the cause of the strong resistance to decomposition in some other bodies. The precious stones and metals will owe the stability of their existing forms, and consequently their value, to this same principle, the base of the alkalies. The material substance, or gravitating principle is *one*, it is the same in all the metals, and if each metal were a simple sub.

stance, there could be no variety, there could then be but one metal. But there are a variety of phenomena attending them, some of which necessarily depend on other substances than simple matter. Such are their brilliancy, their various colors, their different degrees of malleability, solubility, and fusibility.—Their attraction for the acids, and for caloric, while they are not affected by the alkalies, is presumptive evidence that they already possess the alkaline base.

We will hazard a few more remarks with a view to trace this substance through some other of its forms, or combinations. There is reason to believe, that the simple principle called *nitrogene* is the same with the base of the alkalies. The facts on which this conjecture is founded are these: *nitrogene* combined with *hydrogene* forms *ammonia*, one of the alkalies; but *hydrogene* has no alkaline properties, therefore the base of this alkali, or that on which its alkalescence depends, is the *nitrogene*. Another fact which strengthens this conjecture is, that *nitrate of potash*, which is compounded of an *alkali*, with *nitrogene* and *oxygen*, is among the most powerful antiseptics known. If *nitrogene* is the base of alkalies, then both the constituents of nitrate of potash contain this base.

The base of the alkalies, or the basis of sweetness, is of course an immaterial substance, or a principle essentially different from that of gravitation and repulsion, its distinguishing qualities are not gravity and solidity. Hence it is obvious that this substance cannot be measured by its *weight*, but that, like caloric, it will require a peculiar instrument for ascertaining its comparative quantities. It is obvious, too, that whenever it appears, in a solid form, it is necessarily combined with matter, or *hydrogene*. And it farther appears from the causti-

city of the alkalies, that they contain *oxygene*, which substance would seem to be a peculiar compound of *hydrogene* and *caloric*, and perhaps it is one of the primitive creations, or combinations, which never is decomposed. It is to all these various circumstances, and perhaps some others, that the alkalies owe their variety of forms.

If these conjectures are well founded, it is highly probable that the *nitrogene* as well as the *oxygene* gas of the atmosphere, is decomposed in breathing, and may be necessary to animal life, notwithstanding that, alone, it is deleterious. This has been already conjectured by some chemists. As the *oxygene* supplies the principle of life, the *nitrogene* will tend to maintain health; it will regulate the action of the principle of life; it will oppose putrescence in the blood, and in the system generally. In all this, the basis of sweetness in the physical world, is analogous to the basis of harmony, or to *truth* in the moral and metaphysical worlds; or to speak more correctly, the *basis* of sweetness belongs to the metaphysical world as really as *truth*; they are both invisible to the senses, and to the mind also, and are perceived only in, or through their phenomena.—And they are alike in their effects; sweet substances are not liable to putrescence, or decomposition; and truth is imperishable, and transmits to future ages whatever is connected with it. Divine truth is the *tree of life*, “its leaves are for the healing of the nations.”—“Whosoever heareth my words, and believest them, shall never die.” This was said by him who is truth itself.

Truth, it has been said, exists only when perceived. The same doctrine has been held respecting the *phenomena* perceived by the senses; it reduces all the pheno-

mena of nature to *sensations*. Sweetness, say these philosophers, is a sensation, and can exist no where but in the mind. This is confounding the *sensation*, with the *object* of the sensation. A certain philosopher has told us, that the *heat* which burns the finger, is not in the fire, but in the finger. He reasons thus, "The *pain* "produced by holding the finger in the fire, is not in the "fire, for pain is a *sensation*, and sensation exists no "where but in the mind. But heat also is a sensation, "and therefore is not in the fire, but in the mind." But, with deference, heat is not a sensation; heat is the object and exciting cause of a sensation. The sensation is not heat, but the *perception* of the heat. Pain is a general term for a class of sensations; the sensation of heat is a particular sensation, and the heat exists independently of the sensation, or of being perceived.—Neither is *sweetness* a sensation, but it is the object of a sensation. Sweetness is a phenomenon, an operation perceived by the organ of sense. The sensation of sweetness, is the *perception* of sweetness. Every one knows what perception is, and that perception is not sweetness, nor sweetness, perception. Does truth *exist* when it is perceived? then it must exist always, and every where, independently of being perceived; for at what time, or in what place does it cease to be a truth, that two and two are equal to four.

CHAPTER V.

OF THE ESSENCE OF GOD.

WE approach this subject with profound awe.— — —
O thou who touched Isaiah's lips with a live coal from off thy altar, guide my pen.—Sooner, "let my "right hand forget its cunning," than it give utterance to error, or to an impious thought.

Perhaps the title of this chapter may displease or alarm the sensitive christian, if he has not entered fully into the spirit of what has gone before; if he has, his inferences respecting the constitution of the divine *Essence* will accord with what follows. But some will exclaim, "Who can by searching find out God: who "can find out the Almighty unto perfection? His way is "in the deep,—His path in the deep waters,—His judgments are a mighty deep,—His counsels are unsearchable."—We bow a sincere and solemn assent.—But although these are solemn truths, they are not intended to preclude inquiry respecting the *nature*, or *essence* of God; on the contrary, the holy scriptures themselves make it an imperious duty to know God. "For this is "life eternal, to know thee the only true God, and Jesus "Christ whom thou hast sent." There are the most fearful denunciations against those who *know not God*. It appears then, that in one respect we cannot "find out "the Almighty unto perfection;" and that in another we can, and do know the "living and true God."

The inquiry then is, in what respect is it that we cannot *find out the Almighty*; and in what sense is it that the knowledge of God can be acquired? In pursuing this inquiry we shall take the holy scriptures for our guide; for though it is through the senses and the faculty of reason that we discover originally the simple *elements* of all things, it is to revelation we owe the knowledge of the *constitution* of the Creator of all things. And we trust it will appear, or that it has already appeared, that *Power, Spirit, and Truth constitute the Essence of God*.

We desire to have it clearly understood, that we do not pretend to any philosophical discovery, or to know any thing respecting the constitution of the divine Essence, more than is revealed in sacred writ. All that is intended here, is to point out the *fact*, that the knowledge actually possessed, or derived from revelation, includes a knowledge of the *Essence*, or *Substance* of the Divine Being.

In what respect then is it that we cannot “find out the “Almighty?”—The things relating to God which we cannot find out or comprehend, are His “thoughts”—His “ways”—His “judgments”—His counsels”—His “path.”—“As the heavens are high above the earth, so “are my *thoughts* above your thoughts, and my *ways* “above your ways.” “His *path* is in the deep waters.” “His *counsels* are not known.” “His *judgments* are a “mighty deep.” Neither can we comprehend the *extent*, or the *immensity* of the being and operations of God, nor the *infinity* of His duration. “Where wast “thou when I laid the foundations of the earth.” “Hast “thou perceived the breadth of the earth? declare if “thou knowest it all.” “Where is the way where

“light dwelleth? and as for darkness, where is the place thereof?”*

But in what respect is it that God can be, and is, known to the human mind? What is it to know God? Is it to know that infinite Power, Intelligence, and Truth belong to Him, but without daring to know the meaning of the terms, without presuming to inquire what is the precise character, or predicament of these things, without inquiring, whether *Power* and *Truth*, are constituents of His *Essence*, or are only *attributes*, and either may, or may not be exercised in conjunction with *Spirit*? Is it to acquiesce in the metaphysical *dogmas* of the schools, as to what may be affirmed of the constitution of the divine *Essence*, without inquiring whether, or not, those *dogmas* are in accordance with revelation and with reason? It is in the exercise of reason that we discover the existence and the predicament of the elementary substances, power, spirit, and truth; but it is certainly not from reason, nor from philosophy, but from the sacred scriptures that we derive the knowledge of the constitution of the divine *Essence*.

Some things relating to God, some of His *thoughts*, *ways*, &c. are not revealed, and if they were, probably we could not comprehend them. His thoughts are too high, and His counsels too deep, to be reached by our limited capacities.—Some things are revealed—His infinity, and immensity—but we are unable to comprehend them. But some things are revealed which we can and do comprehend. The constitution of the divine Being or *Essence* is revealed, and though we cannot comprehend the infinity or immensity of the con-

* Job.

stituents of that Essence, we can and do comprehend their *nature*.

It is revealed in sacred writ, that Power, Spirit, and Truth belong essentially to God; but it has been demonstrated that Power, Spirit, and Truth are *substances*, or *essences*; therefore these elementary essences constitute, or enter into the constitution of the divine Essence. But human reason is adequate to the comprehension of the nature of these simple essences. Though we do not comprehend the infinity or immensity of *power*, we do know very well the *nature* of power, or the *essence* of power. It is the *essence* of power to contract and repel. The efficient cause of contraction and repulsion is the *essence* of power. And though we cannot comprehend the *eternity* of the divine Spirit, nor how that Spirit fills all space, yet it is known that the power to perceive is the *essence* of Spirit. And we do know or clearly conceive of the nature, or *essence* of Truth; though we do not, nor shall we ever arrive at the knowledge of *all* truth.

To know God, is to know His nature; it is to know the dispositions, or tendencies of His Mind, or Being; it is to know what are the phenomena, or the necessary operations of His Mind or Being, if we may so speak. It is to know that He *does* what he pleases “in the armies of heaven, and amongst the inhabitants of the earth;” that He *knows* all things, past, present, and to come; that He *abhors* iniquity; that He *loves* truth and uprightness; that He *compassionates* the unhappy; and that He *despises* the proud. These are the operations, or the phenomena of the divine Mind,—and when the phenomena of any being are known, the nature, the *essence* of that being is known. If God *does what He will*, in the armies of heaven,—He must possess

almighty *power*; if He know all things, He possesses *spirit*, or intelligence; if he love truth, then *truth* must be a part of Himself, or a constituent of His *Essence*. If every action of divine power, is directed by spirit, or intelligence, and governed by truth, then Power, Spirit, and Truth constitute the divine *Essence*.—But if, as it seems to be believed, Spirit were the only substance, or essence in the divine Being, and power, and truth were *attributes*, then it would seem that the operation of Spirit would be the only *necessary* operation of the divine Being, that Spirit may exercise power at pleasure, and that *truth* may, or *may not*, influence the operation. This direful consequence is implied in the principle, that God is a simple *Essence*. If Spirit were the only *essence* of the divine Being, He would not then be essentially or necessarily *holy and true*.

Whenever the divine *Essence* is spoken of, that which is meant is either the Power, the Spirit, or the Truth of God, or all these united; or there is no meaning, nor specific idea annexed to the terms. The *essence* of any being or thing, is that which *makes that being or thing to be what it is*. It may be affirmed without fear of contradiction, that Power, Spirit, and Truth, *make the Supreme God to be what He is*.—We speak with reverence. In fact, these substances, and their operations constitute all that is known of God. If there is any other *Essence* of Deity, if there is any *substratum* of Power, Spirit, and Truth, that *substratum* must be the *efficient cause* of these things, for this is the idea of a *substratum*. But is it actually known that there is an efficient cause of Power, Spirit, and Truth? Is any one of these things of such a character as to require a cause, or to indicate that a cause is necessary to its existence. No, certainly. Who ever

thought of a *cause* of the Spirit of God, or a *cause* of Truth, or a *cause* of Almighty Power?

But it is often asserted that the human mind is incapable of comprehending the nature of the divine *Essence*, or of discovering, or understanding what is the divine *Essence*. This must, or should, be predicated on some principle already known. For one who knows nothing, or professes to know nothing of a matter, to pretend to point out what can, or what cannot be known of that matter, is preposterous. If it has actually been ascertained that human reason is inadequate to comprehend the nature of the divine *Essence*, that discovery must have been made by a comparison of the thing to be comprehended, with the human faculty for comprehending,—of human reason, with the divine *Essence*. But this would imply a previous knowledge of the divine *Essence*, the very knowledge that is disclaimed, and which, it is asserted, cannot be acquired. So that the assumption—human reason cannot comprehend the nature of the divine *Essence*, is irrational.

Before it can be rationally affirmed of any being, that he is incapable of knowing what is the divine *Essence*, we should be acquainted, not only with the capacity of that being, but also with the nature of the divine *Essence*. We might with propriety pass a judgment of this kind on some mind inferior to our own. We may have ascertained, that a horse is incapable of comprehending a syllogism. But if a horse, without exploring the ground and making the experiment, should pronounce respecting himself and his species, that none of them are able, or ever will be able to get within a certain inclosure, should we not pronounce this judgment of the horse *irrational*. And it would certainly be inconsistent with the enterprizing character of the horse.

Just such a judgment is it, when pronounced by man, upon man, that he is incapable of ascertaining the nature of any specified object. He is irrational in attempting to make a comparison between any object, and the capacity of man, unless he first ascertain the nature of that object.

It is not genuine philosophy that pretends to anticipate the possible limit of her own career, or to determine beforehand what can or cannot be known. If an angel from heaven should stoop down and tell us, that we are incapable of comprehending the meaning of the terms which designate the divine Essence,—or if revelation told us so, then indeed it would become us to refrain from inquiry. But we ought then, modestly to lay aside the term divine *Essence*, a term that could signify nothing to us. And we should feel ourselves sink below the scale of being in which we had believed ourselves placed; we should feel that we cannot really be made in the *image of God*, since, if that were so, the *nature* of man—undepraved, would be similar to the *nature* of God, and so far as we understand our own nature, or the constituents of our being, we should understand that of our Creator.

Power, Spirit, and Truth, in man, are, though finite, the same in *nature*, or in *essence* with Power, Spirit, and Truth in Him who is infinite in all His perfections. The infinity and immensity of the divine Being are not objects of philosophy, they are no part of that which is properly called the *nature* of the divine Essence. They are the mathematical properties of the divine Essence; and there can be no comparison between them and the mathematical properties of a finite being. But we are authorized by the Word of God to say, that the *nature*

of finite man, is the same with the *nature* of that which is infinite.

Power, Spirit, and Truth are perceived by reason to be self-existent efficient causes, and this is the very idea of Deity. These efficiencies, unconnected, are reason's gods. We cannot demonstrate, on philosophical principles, that these three are united in One Supreme. The knowledge of this fact we owe entirely to revelation. But if Power, Spirit and Truth are essences, or efficient causes, and if these three constitute the Being of God, then the Hebrew word, *Elohim*, is intelligible; there are then, in one sense, three gods; or there are three independent efficiencies, infinite and eternal, in the One Omnipotent, Omniscient, and infinitely Holy God.

It would seem a necessary appendage to the foregoing, to inquire what, or who is he, who is called the *Son of God*.

It appears to be assumed as a first principle in the philosophy of this subject, that the relations of "Father" and "Son" in the divine Essence is a deep *mystery*, and that a knowledge of the distinctive character of the "Son" is unattainable in the present state of things.

It is the boldest presumption to attempt to be *wise above what is written*, or to substitute our own unfounded imaginations, for the true philosophy of the gospel. At the same time it is a reprehensible negligence, to pass over that which is expressly revealed, without an attempt to comprehend it, where there is no accompanying clause which forbids too bold a scrutiny. "Without controversy, great is the mystery of godliness—God manifested in the flesh," &c. But with

humility we would venture to observe, that the sacred scriptures evidently assume, that human reason is adequate to comprehend many of the *facts* which they record, and this one in particular, that *Jesus is the Son of God*. This *fact* is in part what St. Paul alludes to when he speaks of “the mystery which was kept secret since the world began, but now is made manifest.”*

The Jews were addressed on this subject by our Saviour, as though there were no question but that they perfectly understood the terms, “Father” and “Son;” and though they were enemies to his person and character, and though they charged him with blasphemy when he spoke of God as being his Father, they never caviled at his assertions as incomprehensible. If there had appeared to them any *mystery* in the assertion, that he was the Son of God, or any thing which they could not reconcile to what they had learned from the law and the testimony concerning the nature and perfections of God, they had doubtless turned it to account in their opposition. But the terms “Father” and “Son” are *figures* which were familiar to the Jews, and they do not seem to have ever conceived the thought of raising an objection to the fact, from the language in which it was expressed. While our Saviour was on earth, he called on the Jews and all others to *believe* that he was the Son of God; and it was demanded of them to believe, not merely because he testified the fact, but because of the *works* which he did—because his character and manners were rational evidence of his origin, or his *parentage*. “If ye believe not me, believe the works.” They were bound

* Romans xvi. 25.

in duty and in reason to infer from his works, that he was the Son of God; and it was their condemnation that they did not believe his works. But they could not have been condemned for not drawing this inference, if they had not been capable of comprehending the import of it. Those who were not disaffected, did in fact deduce this very inference.—“*Rabbi*, thou art “the Son of God.” We are called on still to believe the same thing, on the same ground; and all genuine Christian faith includes, necessarily, some apprehension of the nature of the fact, that Jesus is the Son of God.

From the general import of the metaphorical terms *father* and *son*, and from all that is declared in sacred writ respecting the “Father” and the “Son,” it would appear, that the relation of Father and Son in the divine Essence, is the relation of *Cause and Effect*,—or that the “Son” is the eternal *Operation*, of the eternal *Cause* or “Father.”

We shall inquire first what is the *general* signification of the terms *father* and *son*. And if we should adduce ever so many instances, it would be found, that in every case, the relation of father and son, or of parent and child, is the relation of *cause and effect*, or of *agent and operation*. The following are a few of the innumerable instances which might be adduced. God is called the *Father of Spirits*, because he is the *Cause* of the individual existence of spirits, or minds. He is called the *Father* of mercies, because mercy is a constant and necessary *operation* of his Mind. Satan is called the *father of lies*, because he was the first who framed a lie, and is the prime instigator of all lies. The terms have the same signification in the following metaphors:—*fathers of the church, daughters of Zion*.

born of the Spirit, sons of thunder, sons of Belial,—wisdom is justified of her children.

God is said to be the *Father* of all things, that is, the first *Cause* of all things. By a similar figure the operation of the first cause is called the *Son*.—He is called also the *image*, and the manifestation of the Father, the *express image* of His person. Now the image of any *cause* can be nothing else than the *effect* or *operation* of that cause. There is no other way in which a cause can present its *image*, or in which it can manifest itself, than either in its action, its operation, or in its more remote effect, a fixed *product* of that operation. Power, Spirit, and Truth constitute the “Father,” or first Cause; and the *operation* of these three efficient causes united in One Supreme, constitute the “Son.” The *Son* is said to be co-eternal with the “Father;” so is the operation of the first cause co-eternal with that cause. The eternal “Son,” is the eternal operation of the Father, or first cause, or causes—*Elohim*.

The *operation* of any being, or of any cause, is the *offspring*, and the *image* of that being or cause. The *operation* of Power, Spirit, and Truth combined in One unchangeable Being, is the *Son* or *Offspring* of that Being, in the same sense that the operation of a man’s mind is the offspring of his mind. And the “Son” is the image, or character of the “Father” in the same sense that the thoughts, and feelings, and actions of a man, form the image or character of the man. The “Son” is the operation, or more strictly speaking, he is perhaps the *product* of the operation, a consolidated living *record* of the thoughts, and actions, and affections—if we may say so, of the “Father;” as the memory and mind of a man is made up of a consolidated

living record of his past thoughts, feelings, and actions. We hope to be indulged while we endeavor farther to illustrate this position.

In the physiology of the human constitution we learn, that the animal body is sustained and has its original growth from the *action*, or the various *operations* of the organs which constitute the system of animal life. The body is thus formed,—and the *mind*, or the *brain and nervous system*, or the external and internal *organs of sense and perception* are formed, or have their growth and maturity from the operations—the thoughts, feelings, and actions, which take place in this system, and which are excited in it by the *stimulus* of the impressions of external objects upon the organs of sense. The late discoveries of phrenologists tend to confirm this theory, and to prove that the brain and nervous system form the mind with all its habits and associations.

The brain and nerves, or the *mind*, is the subject of our ideas and sensations, and every idea, being a motion, or vibration, or configuration in the brain, consolidates a portion of the nervous fluid in which it takes place, and leaves in that consolidated part, a trace of the idea, or mode of action which gave it birth; or to be more explicit, the idea, or action of the brain consolidates, or produces a minute nervous fibre, with a form exhibiting the idea, or mode of action which gave it form or existence, and with a tendency to repeat that mode of action whenever it is stimulated. Every repetition of the idea will increase the bulk and consistency of the nervous fibre; in the same way that the actions of the muscular system increase the bulk and strength of the muscles. This consolidation of ideas, in time forms the brain or *mind*, every part of which

retains a facility and tendency to repeat the ideas or modes of action by which it was formed. This facility and tendency to repeat former ideas, is that which is called memory, and habit of thinking, or association of ideas.

Thus the body is formed by the actions or operations, and the consolidations of the animal fluids; it will of consequence exhibit in itself, in its figure and constitution, the nature or manner of the action of those fluids, or of the operations by, and in which it was formed. This is a natural consequence; and it is proved by facts, by the diseases and deformities produced in the animal frame by *morbid action*, or by a wrong direction of the fluids.—Just so the *mind*, or brain, having been formed or consolidated by the thoughts, affections, and actions which have taken place in the nervous fluid, it will exhibit in its form and character, a tablet, or record of those thoughts, and affections, and of its own reaction upon the ideas excited within it.

The brain then, or the mind, is a living record of our former ideas and sensations; it will exhibit, in its form and habits, that which is otherwise called our habits of thinking, and our prevailing sentiments and propensities. The *mind*, as well as the body, is formed of power and spirit, or matter and spirit; and we may very reasonably, indeed we are bound in reason to admit the evidence of this analogy between the body and mind, in reasoning of the constitution or formation of the latter. The brain then, or mind with all its acquirements, is the *offspring* of the *operations* of the united substances of which it was originally formed; and it is evolved in those operations, or in the *reaction* of these substances upon the ideas, or the *stimuli* presented to it through the organs of sense—as a plant is

evolved in the *reaction* of the germ upon the nourishment it receives.

And would it not be a most rational *hypothesis*, that there exists a record, a living record of all the actions of the divine Mind, of all the *operations* of His Power, Spirit, and Truth? Is it not a necessary conclusion from the existence of such a Being as is the true God, that His operations from all eternity are recorded, or consolidated somewhere, and that this record will exhibit the character, the express image of the *operations*, and also of the agent, the divine Mind.

Every star and planet God has formed, is a record, the operation of His power, and every rational being is an exhibition of His wisdom and goodness, as well as of His power. These are called the "sons of God;" but these are not the "Only Son," or the "express image."—Those creatures are formed and left to the natural exercise of their own powers and tendencies, only under the continual superintendence, and the occasional controul of the Creator. As these creatures are distinct from the God who made them, so their operations are their own, or distinct from His operations. But in the "Son," every action, thought, and feeling—every operation is the very Operation of the "Father." It is sometimes the operation, and sometimes it is the living record of the operation, that is signified or alluded to in the term *Son*. This is a fact attested by the apostles. "The Word was made *flesh* and dwelt "among us."—"That which was from the beginning, "which we have heard, which we have seen with our "eyes, which we have looked upon, and our hands have "handled of the *Word* of life." That part of speech which is called the *verb*; literally, the *word*, represents, or is the sign of, *operation*; but the "*Word*" spoken

of by the apostle, is the operation itself. This at least appears to be the most easy and natural interpretation of the apostle's language; and we are not aware of any serious objection to it. Every general term has some general signification, or there is something common to all the things represented by that term. But the general signification of the term *word* is well known. Words are *signs*, the signs of things. The words of a language are the *artificial signs* of both substances and their operations; but phenomena, or visible *operations*, are the *natural signs* of invisible substances, or efficient causes. Operations then come properly under the denomination of *words*, or they belong to the class of objects called *words*. In this sense, motion is the word, or the language of power, or it is that by which power makes itself known; and perception is the *word*, or the language of spirit, or that by which spirit is made known.

In the Gospel by John it is said: "In the beginning **was the Word**, and the **Word** was with God."—"The **Word** which was in the beginning, with God, was the operation of God, for it is farther said, "By Him," the **Word**, "were all things made that were made, and "without Him was not any thing made." It is a necessary truth, that by the operation of God, or of the First Cause, all things were made *that were made*, and that without that operation there was not any thing made. It is impossible to conceive that any thing more, or less, than the operation of God, or of infinite Power, Spirit, and Truth, could have been employed in the creation of the world. But St. John says, All things were made by the **Word**. Hence, the **Word**, and the operation, are the same.

It is agreed on all hands that the "Word" is the same with the "Son." And it is also a self-evident truth, that nothing less than the "Word," or the *operation*, of infinite Power, Wisdom, and Truth, is required, to redeem mankind and to defend the redeemed from all their enemies, moral and physical.

We are informed in the sacred oracles that Jesus Christ is the "Son of God." It is certainly intended that we should comprehend the meaning of this affirmation. The fact affirmed is an object of Christian faith; but how could the Christian believe and confide in that which he did not comprehend. The apostle John says, "Whosoever shall confess that Jesus is the Son of God, God dwelleth in him, and he in God." Now to confess this without annexing any definite signification, or idea, to the words, and to make the confession, at the same time, a criterion of the genuineness of our own or another's faith, and of our being in God, would be absurd. It is necessary that we conceive, or comprehend what we confess, otherwise the confession is not the effect, and evidence, of our being enlightened from above, or of our being "in God."

There is a native love of mystery in the human mind, which is gratified by seeing things darkly, or through a mist. Truth is a natural enemy to this propensity, and when she comes to interrupt its gratification, she is apt to be treated as an intruder. The moon is much less useful or necessary to man, than the sun, yet how enchanting is a moon light scene; and if the glorious sun should suddenly and unexpectedly arise in its splendor to chase the illusions of the scene, would it not excite a sensation similar to what is felt at the entrance of an unwelcome visiter. That Jesus is the "Son of God," is given as matter of fact,

it is given also as the foundation of the church. "Peter saith unto him, thou art the Christ, the Son of the living God. Jesus saith, On this rock will I build my church." If this fact, or truth, be the foundation of the church, it must be plain and palpable; if it were an incomprehensible mystery, it were then an unfathomable deep, that would swallow up the church.

But there is still enough of mystery connected with this subject to gratify a reasonable love of the sublime. What subject is it, either in nature or in grace, that is not mysterious, when we attempt to look through the phenomena into the invisible world. But the "mysteries" of the gospel are not all represented as incomprehensible things; we are not forbidden to approach them with the understanding's eye. The parable of the "sower" is one of these mysteries, but it was intended for instruction, for a light, a "candle," which was not intended to be put "under a bushel." The disciples asked their master after he had spoken this parable, why he spake to the multitude in parables; and he answered, "It is given to you to *know the mysteries* of the kingdom of heaven, but to them that are without it "is not given."

It seems then from the scriptures themselves, that a "mystery" is not a thing which is necessarily, or in its nature, incomprehensible, or wholly without the sphere of human investigation. A subject is sometimes rendered mysterious, by the application of the same word, to things which are circumstantially different, though essentially the same. The apostle John observes, "No man hath *seen* God at any time." Yet our Lord says, "He that hath *seen* me, hath *seen* the Father." These two affirmations, though apparently contradictory, must be perfectly reconcilable, for they are from the lips of

truth itself. And they have a parallel in the common and familiar language of life. It is common to say we *see* substances, but it is well known that we do not see substances, that is, we do not see them with the bodily eye; yet we do perceive them with the eye of reason; and it is true, that whoever sees the phenomena or *operations* of a substance, perceives the *substance*. "He that hath seen me, hath seen the Father," that is, he that hath seen or discerned the real character of the "Son," that he is holy, and just, and good, and wise, hath seen the real character of the "Father," that He is holy, and just, and good, and wise. He who hath seen the operation of the Father, hath seen the Father, or the efficient cause of the operation.

The written word of God, consists of the artificial signs by which He makes himself known; but the operation is the natural sign, or natural word. The children of men are favored with both these *signs*. "God who at sundry times and in divers manners spake in times past unto the fathers by the prophets, hath in these last days spoken unto us by His Son." The prophets conveyed to us the knowledge of God by words, or artificial signs; but in the "Son" we have the natural sign, the express image, the very thoughts, feelings, and actions of the Most High exhibited before our eyes. "The Father who dwelleth in me, He doeth the works." He condescends to exhibit to us the very manner of His thinking, feeling, speaking and acting.

We have endeavored to touch this subject as cautiously and as lightly as might be, consistently with perspicuity, and with fidelity to the cause of truth. It had not been touched on at all, but that the subject of the constitution of the divine Essence, was necessarily involved in the subject of the elementary principles of metaphysics.













